

A P P E N D I X.

Appendix, No. 1.

PAPERS handed in by *J. K. Cross* (a Member of the Committee).

CORRESPONDENCE REGARDING INDIAN RAILWAY POLICY.

1 8 8 1-8 4.

C O N T E N T S.

	Page.
1.—Despatch to India, 6th January 1881. Summarises orders already laid down regarding Productive Public Works, and approved by Select Committee of 1878-79, and defines Productive Works. Encouragement of private enterprise on exclusive security of the success of the undertaking - - - - -	488
2.—Letter from India, 22nd July 1881. Proposed to construct 3,000 miles of lines designed to give protection against Famine, in next five years, by Private Companies with limited guarantee, interest being met from the Famine Insurance Grant. Major Baring dissents from this method of providing for the interest, but thinks it can be met from the funds available by the cessation of the Annual Loans, and the development of the Railways - - - - -	492
3.—Despatch to India, 8th December 1881. Private enterprise not a suitable agency for unremunerative lines. Hope that finances will soon admit of more rapid construction - - - - -	507
4.—Letter from India, 23rd January 1883. States conclusions as to general Railway Policy. Scheme for giving productive lines to private enterprise, and using Famine Insurance Grant as interest for companies working with a limited guarantee. Thirty two millions to be spent in five years (of which 12½ millions by Limited Guarantee Companies), besides lines costing 24½ millions offered to private Unguaranteed Companies - - - - -	508
5.—Despatch to India, 16th August 1883. Large Outlay proposed, not approved. Question of Railway Extension will be referred to Select Committee - - - - -	546
6.—Letter from India, 24th September 1883. Demurs to Secretary of State's calculations, and urges construction of certain lines without delay - - - - -	550
7.—Despatch to India, 13th December 1883. Generally adheres to former view - - - - -	559
8.—Letter from India, 29th January 1884. Summarises the views of the Government of India - - - - -	560

CORRESPONDENCE REGARDING INDIAN RAILWAY POLICY
1881—1884.

No 1.

DESPATCH to the Government of India, 6 January 1881, No. 1 (Financial).

My Lord Marquis,

Paragraph 1. THE principles which are to guide the expenditure on productive public works in India have formed the subject of frequent correspondence* between my predecessors and the Government of India during the last few years. It is unnecessary that I should dwell on the facts and arguments which have led to the adoption of those principles. It will be sufficient for my present purpose if I indicate my concurrence in the view expressed by the Select Committee of the House of Commons in 1879, to the effect that the expenditure upon railways and irrigation has, "upon the whole, been beneficial to India, and that, although considerable sums have been wasted and certain profitless schemes undertaken, the policy of continuing to borrow for productive public works "may, within certain limits and restrictions, be continued." I am of opinion, however, that at the present moment, when some important changes have recently taken place in the composition of your Excellency's Council, it is both desirable and opportune to resume in one Despatch the nature of those limits and restrictions subject to which productive public works' expenditure may be continued, and at the same time to give as much precision as the circumstances of the case admit to any instructions which may appear, from a perusal of former correspondence, to be open to doubt.

¶ 2. I wish, however, in the first instance, to dwell briefly on the expediency of constructing, through the agency of private enterprise, some of the works which, under the existing system, are undertaken by the State. It may be a question whether, in the case of a canal used wholly for navigation, an attempt should not be made to ensure its construction by private enterprise, but when, as is usually the case, canals are made either wholly for irrigation purposes, or for irrigation and navigation combined, their construction must, as an almost invariable rule, devolve upon the State. In the case of railways, I do not doubt that your Excellency will bear constantly in mind the importance, whenever possible, of ensuring their construction by private capital, either local or European. It is true that up to the present time no companies have been found willing to undertake the construction of railways without a Government guarantee, but I would nevertheless strongly urge upon your Excellency that, when any reasonable prospect of success presents itself, an endeavour should be made to encourage the raising of capital through private agency on the exclusive security of the success of the undertaking. Any step in this direction will meet with my most cordial support and co-operation. In the event of its becoming apparent that the due execution of this policy is impracticable, it may become desirable to consider whether a modified system of guarantee might not advantageously be adopted. By a modified system, I mean one so restricted in respect to time and to the rate of interest guaranteed as to give the subscribers a real interest in the efficient and economical administration of the railway.

3. Turning to works undertaken by the State, I find that the main principles laid down by my predecessors for the guidance of the Government of India are —

1st That the annual expenditure on productive public works from all sources, that is to say, whether from borrowed money or surplus revenues, should be for the present restricted to the fixed sum of 2,500,000 †

2nd That, for the inclusion of any work in the productive class, it is necessary that there should be a prospect of its repaying within a reasonable time the whole of the interest incurred on the money expended in its construction, though it is immaterial whether the interest which accrued during the process of construction be treated as a charge against income of future years, or be added to the capital on which interest is paid ‡.

Each

* *Vide, inter alia*, Financial Despatches from the Secretary of State — No 267, of 31st July 1878, No 62, of 20th February 1879, No 106, of 27th March 1879, No 420, of 23rd October 1879, No 444, of 13th November 1879, No 465, of 11th December 1879.

† No 420 (Financial) of 23rd October 1879, paragraph 5. See Secretary of State's Despatch, No 444 (Financial) of 13th November 1879, paragraph 10.

‡ No 62 (Financial) of 20th February 1879.

Each of these principles calls for some special remarks.

4 The reasons for fixing the present limit of expenditure were explained by the late Under Secretary of State for India (Mr Stanhope), in the House of Commons, on 22nd, May 1879, to be, that as it had been decided that money required for public works should be borrowed in India and not in England, the amount should be limited to that which the Government of India could fairly be expected to borrow in ordinary years without undue disturbance of the money market in India. As regards the expenditure of surplus revenue, there appears to be no reason in principle why, in the event of a *bond fide* surplus of receipts over expenditure being realised in any one year, and not otherwise appropriated, any such surplus should not, under certain conditions to which I will allude presently, be added in the following year to the amount borrowed for expenditure on productive public works. It will be, in the first instance, for your Excellency to judge whether it will be desirable to devote surplus to this purpose, or whether it will be preferable to undertake the construction of works which, from their unremunerative character, cannot be classed as productive, or to apply the funds at your disposal to the remission or re-adjustment of taxation, or to the reduction of sterling debt, or to the diminution of the amount borrowed in India for productive public works. In deciding on the adoption of one or more of these alternative courses, much will depend on the circumstances of the moment, and I do not wish to lay down any very precise rules as to the proportions in which surplus revenue should be applied to these several objects. I will merely observe that, equally with my predecessors, I attach great importance to the reduction of sterling debt in years of prosperity, but, in the event of any appropriation of surplus revenue to productive public works expenditure, I must impress on you strict adherence to the conditions under which the surplus of any one year may be added to the amount borrowed in the succeeding year for productive public works indicated by the Select Committee of the House of Commons, viz—

- 1stly That the general debt of India should be relieved, and the productive public works debt increased, by the amount of the surplus so added
- 2dly. That care should be taken that the permanent establishments be not increased so as to prove burdensome in years when no surplus of preceding years is available.

5 Unless such care be taken, in years when surplus funds are available, the Government may, in a subsequent year, when no such funds are available, find itself obliged either to borrow more than 2½ millions, or to postpone the completion of works partially constructed, and, therefore, very possibly for the time wholly unproductive. The adoption of the first of these alternatives would infringe the principle laid down by successive Secretaries of State and by the House of Commons Committee, the adoption of the latter would be obviously wasteful and objectionable.

6 One further point in connection with this branch of the subject is to be noted. The limit of 2½ millions, as a limit of expenditure and not of borrowing, applies to average annual expenditure, that is to say, the unspent balance of any one year may be re-allotted and added to the 2½ millions of the succeeding year, if there be good ground for supposing that the whole sum can be profitably spent. On this point I need only direct your attention to the remarks contained in paragraph 7 of my predecessor's Despatch, No. 485 (Financial), of 11th December 1879.

7 Turning to the second of the principles enumerated in the third paragraph of this Despatch, which prohibits the inclusion of any works in the productive class unless they are likely to prove remunerative within a reasonable time, I think it desirable to define with somewhat greater precision than has as yet been attempted the interpretation which I request may be given to it.

I will deal separately with railways and works of irrigation.

8 As regards railways, I have already alluded to the importance of securing, if possible, their construction through the agency of private enterprise; and I would observe that the refusal of private capitalists to undertake the construction of a railway, though not an absolutely conclusive proof of its unremunerative character, affords *prima facie* grounds for supposing that it will be undesirable for the State to take the matter in hand. The question of the adoption or rejection of a proposal to construct a railway should, in fact, under ordinary circumstances, be treated as commercial principles. If there are fair grounds for supposing that a private individual or company, content with a moderate return for their money, would invest in the undertaking, the scheme may be adopted, if not, it is questionable whether it is desirable for the State to undertake it. It can scarcely be doubted that no private individual or company would deliberately invest in a railway undertaking which was not calculated to give a return of 4 or 5 per cent. on the capital within at least two or three years of the opening of the line, with the prospect of a considerably larger return in future years. The case of a Government is, no doubt, somewhat different from that of a company, and still more so from that of an individual capitalist, and, therefore, in the case of the first a longer interval of time may probably be allowed to elapse between the commencement of an undertaking and the period when it is expected to become remunerative. In consider-

ing, therefore, the case of railways, the construction which I request may be given to the expression that they will probably be remunerative "within a reasonable time" is this, that they may fairly be estimated to pay, within a maximum limit of five years from the date of the line being opened for traffic, 4 per cent. on the capital invested, including therein all arrears of simple interest incurred up to that date, and also the capitalised value of the land revenue and of leave allowances and pensions.

9 In the case of irrigation canals greater latitude may be given. The period within which they should be calculated to pay 4 per cent. on the capital invested, including the before-mentioned additions to the actual outlay, may be extended to 10 years from the date of completion of the work.

10. These, therefore, are the principles to which I request your Excellency will adhere in considering, under ordinary circumstances, the construction of new productive public works. Such works as are already included in the productive class may, within the limit of expenditure already sanctioned, be concluded, even though the restrictions now imposed would in some cases prohibit their construction with borrowed money. I do not wish it to be understood that these principles are immutable. I am aware that, had they been always followed, India would not now possess many of those public works which, in spite of any occasional shortcomings, have conferred immense benefits on the country. If they are adopted now, it is because those public works which were most urgently needed have already been constructed, and because, in the words of my predecessor,* a rate of expenditure from borrowed money which might have been "proper and desirable a few years ago may, from the altered condition of the finances, "become impracticable or dangerous." Unquestionably, there still remain many works which, considered wholly on their own merits, it might be desirable to undertake, and the completion of which, by reason of the limits and restrictions now imposed, it will be necessary to postpone. I recognise the justice of the principle laid down by the Select-Committee of the House of Commons, "that the amount to be annually "expended upon productive public works should mainly depend upon the financial condition of India," and, therefore, that the limit of 2½ millions now fixed is only temporary. I shall be glad if at some future time the condition of the finances is such as to justify your Excellency's Government in recommending, and Her Majesty's Government in sanctioning, an extension of that limit. Should your Excellency at any time think it desirable to raise again the question of principle, I shall be prepared to give my consideration to any observations which your Excellency may think fit to make. But I must remark that, so long as the normal military expenditure of the Government of India remains uncertain, pending the final settlement of affairs in Afghanistan, the question of taxation in India remains in its present unsettled condition, and many other parts of the fiscal system are manifestly in a state of transition, I am not of opinion that the moment will be opportune for effecting any modifications in the principles enunciated in this Despatch. Until they are modified, I request that, in coming to a conclusion on any particular scheme which may be presented to you, your Excellency will consider not the propriety of these principles themselves, but merely whether, in the application of them, the facts of the particular case justify its inclusion in the class of productive public works.

11 I have so far dealt with the case of productive works constructed in ordinary times, that is to say, not under the pressure of war, famine, or other extraordinary circumstances.

The case of what are termed protective works is very simple. These are works which, although not directly remunerative to the extent which would justify their inclusion in the class of productive works, are calculated to guard against a probable future expenditure in relief of the population. In respect to such works I need only re-affirm the principle laid down by my predecessor,† that they should, in ordinary times, be constructed from revenue, and not from borrowed money. It appears to me that the appropriation of 750,000 £ out of the 1,500,000 £ of insurance taxation for famine purposes will be sufficient for this purpose.

There remains the case of works undertaken for the relief of actual famine, or such as in the case of the recently constructed frontier railways, as form part of the increased expenditure consequent on a war. Successive Governments have recognised the paramount necessity of saving life when famine has arisen. The expenditure on a railway undertaken in time of war for strategical purposes has to be in part considered on other than purely financial grounds. It is obvious, therefore, that in such cases the principles above enunciated do not apply. They must be considered independently on their own merits as the occasions arise.

12. There are some further points connected with the general question treated in this Despatch to which I wish to direct your Excellency's attention.

13 Experience has proved that estimates of expenditure on public works in India are frequently unreliable, even though no work in ordinary times be commenced until a detailed survey and estimate has been made.

14. From

* No. 106 (Financial) of 27th March 1874, paragraph 5.

† No. 444 (Financial) of 13th November 1879, paragraph 11.

14. From the figures given below, and which

Work	Sanctioned Expenditure	Expenditure to end of 1880-81
IRRIGATION		
Orissa canals - - - -	£ 1,931,000	£ 1,953,000
Other projects - - - -	-	220,000
		(in 1880-81)
RAILWAYS		
Rajputana - - - -	3,267,000	3,545,000
Western Rajputana - - -	1,604,000	1,648,000
Holkar - - - -	1,246,000	1,280,000
Rangoon and Irawadi Valley -	1,261,000	1,282,000
Northern Bengal - - - -	1,945,000	2,130,000
Punjab Northern - - - -	3,908,000	4,053,000
Total - - - - £.	15,062,000	16,981,000

are taken from Tables V. and VI. appended to the financial statement of the current year, it appears that, in the case of several works, the limit of sanctioned expenditure has been already exceeded, or will be exceeded by the close of 1880-81, to the amount of 1,019,000 £. I consider that, in all cases where the amount already sanctioned has been nearly spent without bringing the works originally contemplated to completion, fresh estimates should be prepared and submitted for sanction, in time to avoid the possible stoppage of the work and the breaking up of the establishments. By the adoption of this system, both your Excellency and Her Majesty's Government will be afforded an opportunity of reconsidering, by the light of past experience, the expediency or otherwise of incurring additional expenditure on the work in question.

15. In paragraph 9 of my predecessor's Financial Despatch, No. 105, of 27th March 1879, it was directed that in the autumn of each year a programme should be submitted for his approval, showing the principal productive undertakings in which it was intended to make progress during the next official year, and the expenditure contemplated during the year. It is, no doubt, desirable that public works projects should be submitted to me separately for approval, with a view of their being placed on the list of sanctioned works, from which your Excellency may select those which you desire to include in the programme of the coming year, but, as each has to be considered not solely on its own merits, but with reference to the relative merits of others, the selection can only be conveniently made if all the projects are considered together. The annual programme being fixed, no departure from it should be permitted, save under the pressure of extraordinary circumstances.

16 To recapitulate briefly the contents of this Despatch, the principles in respect to productive public works expenditure, to which I request your Excellency will adhere, are as follows —

(1) In the absence of private enterprise without subsidy, or guarantee under satisfactory conditions, irrigation works will be constructed by the State. Every encouragement should be given to private individuals to undertake the construction of railways, if possible, without such guarantee or subsidy; or, if this be found eventually impossible, by some limited form of such guarantee or subsidy, as explained in the earlier part of this Despatch.

(2) No more than 2½ millions may be borrowed in any one year for productive public works.

(3) No more than 2½ millions is to be expended on such works in any one year, unless there is a surplus fund derived from revenues of the previous year which it is thought desirable to appropriate for this object, or there is an unexpended balance of the money borrowed in preceding years, which may be re-allotted and added to the amount available in the succeeding year.

(4) A transfer corresponding to the amount of the surplus so expended must be made from the general debt to the productive public works debt.

(5) The question of constructing new railways is to be considered on commercial principles. No new line is to be undertaken unless there is a good prospect of its proving remunerative, that is to say, unless it can be fairly calculated to pay, within a maximum limit of five years from the date of the line being open for traffic, 4 per cent on the capital invested, including therein all arrears of simple interest incurred up to that date, and also the capitalised value of the land revenue and of leave allowances and pensions.

(6) In the case of irrigation works, commercial principles may be so far relaxed as to admit of their being undertaken, if they can fairly be estimated to prove remunerative in 10 years from the date of their completion, on similar terms.

(7.) Protective works which are unremunerative are to be constructed out of revenue.

(8) Works constructed under the pressure of war or famine do not come within the scope of the principles enunciated above. They are to be considered on their own merits, as the occasions arise.

(9.) Before a project is sent home for my sanction, a survey and detailed estimate is invariably to be submitted and approved by your Government.

(10.) Whenever the amount sanctioned is found to be insufficient to bring the work

to completion, fresh estimates are to be promptly prepared and submitted for sanction.

(11) A programme of productive public works expenditure for the coming year is to be submitted for my approval in the autumn of each year

(12) Some of the principles now laid down are avowedly of a temporary character, but, until they are modified, the essential point for your Excellency's Government to consider, in connection with any particular scheme which may be submitted for your adoption, is whether, in the application of those principles, the facts of the case in question admit of its being included in the class of productive works

17 I would suggest to your Excellency that it might be advisable to communicate this Despatch to the several local governments, and to request that they will only submit for your approval such undertakings as present a fair prospect of falling within the category of productive works as now defined

I have, &c
(signed) *Hartington*

No. 2.

LETTER from the Government of India, 22 July 1881, No 92 (Railway)

My Lord Marquis,

THE report of the Famine Commissioners has, as we have already informed your Lordship in the Home Department, been for some time engaging our earnest attention, and, among the many branches of the wide and diversified question with which it deals, one of the most important is that which relates to the construction of public works intended to secure increased production and protection against famine. It is true that the report shows conclusively that measures of one kind alone will not suffice to guard us against the many and great mischiefs which result from a serious famine. The evil with which we have to deal is a many-sided one, springing from a variety of causes, to each of which appropriate remedies must be applied, before the people of India can obtain the utmost security against the worst consequences of scarcity which it is in the power of a government to afford. But it is obviously desirable to deal separately with each portion of a subject so varied, and we think that there is no part of it more ripe for consideration than that which concerns railway communication. It is upon this question, therefore, that we now desire to address your Lordship

2. The Famine Commissioners speak clearly as to the very great use of railways in removing some of the chief dangers of famine, and lay down that a certain minimum mileage of protective lines, in addition to those which now exist, is necessary for the security of the country. What we have consequently practically to consider is, how the required extension of our railway system can be most speedily and satisfactorily carried out.

3. The history of railway construction in this country is too well known to your Lordship's advisers for it to be necessary to relate it here in detail. Our policy on this subject has passed through various phases. We began with the system of guaranteed private enterprise inaugurated by Lord Dalhousie. After a lengthened trial, succeeded by an abortive attempt to encourage the expenditure of private capital by means of subsidies, this system was condemned by Lord Lawrence in a Minute which he left behind when he retired from the Viceroyalty, and in which he expressed his preference for the plan of State railways constructed by Government with borrowed money. His successor, Lord Mayo, adopted this plan, and pushed it on with energy and vigour. But after a time strong objections were felt, especially at home, on financial grounds, to unlimited borrowing for public works, and of late years successive Secretaries of State, acting in accordance with the recommendations of a Committee of the House of Commons, have placed numerous restrictions upon the railway expenditure of the Government of India. Those restrictions embrace limitations as to the amount to be borrowed, and stringent conditions as to the remunerative character of the largest portion of the works to be undertaken, and the result is that, practically speaking, as will be presently shown, 50 lakhs a year is all that is now at the disposal of our Government, for the construction of these lines of railway which do not fulfil the conditions prescribed by your Lordship for productive works, but which are, nevertheless, of the greatest importance in their bearing upon the prevention of famine, both directly as channels for the importation of food into vast and populous districts, otherwise inaccessible to supplies from other parts of the country in times of scarcity, and indirectly as developing natural resources now latent, and giving rise to new industries and to the diversity of occupations created by an enlarged trade, to which we must look as an important safeguard against famine.

4. Your Lordship has permitted us to spend a sum of 75 lakhs on protective works during the current year, with every prospect of a like sum being devoted annually hereafter to the same purpose. This grant has to be divided between railways and irrigation works.,

works; and, while we consider that at the present time the construction of railways is especially important, we desire to proceed with works of irrigation to the utmost extent compatible with the resources at our command. The extension of irrigation on a scale of sufficient magnitude to sensibly affect the food-supplies of the country at large in time of drought is, however, a task which, your Lordship has ruled, can generally be most efficiently undertaken by State agency, and this condition places a limit on our efforts in this direction, which is speedily reached. Without a very great increase to the establishment of the irrigation branch of our Public Works Department—an increase which could only be effected by degrees and at great cost—we cannot calculate on being able to spend with reasonable advantage under this head more than between 90 and 100 lakhs annually. That is, about one-third of the amount of the protective grant, in addition to the share of the productive grant now allotted every year for irrigation. Setting aside 25 lakhs annually for this purpose, there remain only 50 lakhs per annum available for the construction of our protective railway system, a sum which, on an average, will suffice to provide us with about 400 miles of metre-gauge railway in the course of every five years over which the operations may extend.

5. The Famine Commissioners estimate roughly the minimum extent of lines still necessary for the substantial protection of the country generally at about 5,000 miles; and of this we have strong grounds for believing that at least 3,000 miles will have to be constructed for protective purposes, there being no sure prospect of their yielding such a return within a reasonable time as to lead to their being classed, under the rules prescribed by your Lordship, as productive works, or as would be likely to tempt private capitalists to undertake them without State aid in some form.

6. What we are immediately concerned with is, how these 3,000 miles of new railway are to be constructed. If we are only to devote some 50 lakhs annually to this purpose, it is clear that the work cannot be completed, and the desired protection secured on the most economical system, under about 30 years, that is to say, a whole generation will have passed away before the minimum of railway protection is afforded to the populations of some of the districts of India most liable to famine. This is not a state of things which we can contemplate with satisfaction, and it seems to us that it is our duty to take every means in our power to escape from it.

7. Any considerable increase of taxation, even for so laudable an object as the prevention of famine, is, as experience has amply shown, a matter of very great difficulty in India, and gives rise to serious discontent. We look upon it as quite out of the question to attempt to obtain by fresh taxation any such sum as would be required for the construction of the 3,000 miles of protective railway which we have in view in the course of the next four or five years, while the recognised policy of Her Majesty's Government and of Parliament, to which it is our duty to adhere, precludes us from raising the sum required by way of loan. Nor, if we had the money, whether obtained by fresh taxation or by borrowing, do we believe that it would be possible to do justice to the work in that time by departmental agency alone, the numerical strength of our railway establishment, like that of the irrigation branch, being at present inadequate to bear so severe and sudden a strain.

8. Under these circumstances, and in the present financial position of India, we have no hope of being able to effect what we urgently require, without a delay which it is of the utmost importance to avoid, except by entrusting our railway works to private enterprise under a safe and reasonable guarantee.

9. We are not insensible to the objections which may be urged against anything in the nature of a return to the system which was so decidedly condemned by Lord Lawrence and Lord Mayo, but it seems to us that the evils of which they complained were the result, not of a resort to private enterprise, but of the conditions of the bargains which were formerly made with the guaranteed companies. In this respect we stand in a much better position than Lord Dalhousie and his successors, because we have, to guide us, the results of a practical experience, which was wanting to them. But, further than this, we have a peculiar advantage at the present moment for making another trial of private enterprise, in the existing state of the money market and the amount of money now seeking investments. We have thus an opportunity for inducing capitalists to invest in public works in India, such as, we believe, has seldom, if ever, existed before, and of which, in our judgment, it would be prudent to take early advantage, in order to obtain the acceptance of terms of guarantee, which, while giving the capitalist security for the small rate of interest his money can command in the open market, shall not unduly burden our revenues.

10. We are not at present prepared to lay before your Lordship the details of all the schemes for the 3,000 miles of protective railway we have in contemplation. All the information available in regard to them is being collected; and instructions have been issued by us in our Public Works Department for careful reconnaissances to be made of such of the proposed routes as have not already been surveyed, as soon as the season will permit of parties taking the field. The Appendix to this Despatch shows, in such detail as we can at present give, the character and scope of our protective railway proposals.

11. Our principal object at present is to recommend to your Lordship that private capitalists should be invited to undertake the construction of these lines, upon a guarantee of interest limited both in amount and in duration. We do not think that it would be advisable to lay down any detailed rules as to the terms to be offered, as the prospects of early returns from the different lines must necessarily vary greatly according to the nature of the country through which they pass. It seems to us that each concession should be dealt with by itself and on its own merits, as we desire to make such arrangements as may be least burdensome to our finances, and as will give the companies the greatest possible interest in the successful and economical working of their lines. We should in all cases prefer a lower rate of interest for a longer term of years, to a higher rate for a shorter term.

12. It appears to us that the interest to be paid under this scheme may fairly be charged against the 75 lakhs a year which it has been determined to devote to the construction of protective works; and it is in that manner, therefore, that we propose to provide the funds required for this purpose. By adopting this course we shall keep strictly within the limits of public works expenditure prescribed by your Lordship, to which we are most desirous to conform our action, and we therefore trust that we may look to receive at as early a period as may be possible your sanction to the principles of public works policy, which, after very careful consideration, we have now the honour to submit to your Lordship.

13. Our honourable colleagues, Mr Rivers Thompson and Major Baring, wish to add some remarks in separate Minutes, which will be transmitted by the next mail.

We have, &c.
 (signed) *Ripon.*
D. M. Stewart.
W. Stokes.
Rivers Thompson.
J. Gibbs
E. Baring
T. F. Wilson

Enclosures in No. 2.

APPENDIX.

THE scheme referred to in the accompanying Despatch regarding the construction of a series of railways as famine protective works consists of what may be described as five systems of lines on the metre gauge, comprising a total length of about 3,083 miles, the construction of which, it is estimated roughly, would cost about 1,835 lakhs of rupees, or 15,300,000 £ sterling at the exchange of 1 s. 8 d per rupee.

I—The first system may be called the Nagpur-Bengal-Madras system. Orders are now issuing to the Governments of Madras and Bengal and to the Chief Commissioner of the Central Provinces to put in hand the necessary reconnaissances on which more complete estimates could be framed.

II—The second system can be called the Southern Mahratta and Eastern Madras system. An approximate estimate of the cost is given below. The scope of this system has been already communicated to the Secretary of State in the Despatch from the Financial Department, No. 134, dated 3rd June 1881.

III—The third system, designed to protect the districts of Sarun, Gorakhpur, and the northern parts of Oudh, from famine, is now under survey. The line is intended to start from the north bank of the Ganges opposite Patna, near the mouth of the river Ganduk, and to be taken past Chapra, Sewan, and Gorakhpur, to Bahraich. It will be about 400 miles in length, and, as it traverses very similar country to that in which the Tirhut Railway extensions are now being constructed, the estimate for it may be taken at a similar rate, or at 50,000 rupees a mile.

IV—The fourth system, called the Rewari-Firozpur system, is designed to afford protection to an area of country peculiarly liable to drought. This line is also now under survey, it will start from Rewari on the Rajputana Railway, and be taken via Bhiwani, Hansi, and Sirsa, to Firozpur, its length will be about 300 miles, and, as it passes through a singularly easy country, its cost may be taken at 42,000 rupees per mile. The construction of this railway has already been approved as a protective work.

V—The Bundelkhand system. The total length proposed is about 560 miles, and its estimated cost 349 lakhs of rupees, and the general scope of this system is shown in the accompanying map.

The

The length and estimated cost of the several systems are as follows :—

Miles.	Rs
I—1,063	costing 644 lakhs.
II— 760	„ 516 „
III— 400	„ 200 „
IV— 300 ⁰⁰	„ 126 „
V— 560	„ 349 „

giving a total mileage of 3,063, at a roughly estimated cost of 1,635 lakhs

This rough estimate includes, however, only what are called the direct charges. The indirect charges are not taken into account, excepting the loss by exchange on the permanent way materials

The accompanying map indicates generally the directions and location of the lines proposed in green colour

MINUTE by the Honourable *Rivers Thompson*, 26th July 1881

IT IS IN NO SENSE from any wish to dissent from the proposals of the Despatch of the 22nd July 1881 that, with his Excellency's permission, I venture to add the following remarks. So far as they go, the recommendations of that Despatch have my cordial support, but there are in it certain points in which it seems to me our recommendations might have been stronger and have gone much further.

We are here considering, in the light especially of the Famine Commission's Report, proposals which concern exclusively the construction of railways as works of protection against famine. It may be said, of course, that any line of railway that we could undertake in India, whether productive or protective, by opening out the country and developing its resources, operates to the diminution of the risks attendant upon famine. But still, as the Despatch of the Secretary of State of the 6th January last very clearly establishes, there is a wide distinction between these two kinds of railway projects, both as regard the principles which are to guide us in the expenditure upon them, and the object for which they are to be constructed; and this distinction affects directly the reference which we have now made to the Secretary of State. A line of railway which will pay its 4 or 5 per cent within a few years of its commencement comes within the class of productive works, to be considered, under the latest instructions from England, upon commercial principles. For the construction of such lines private enterprise may be invited, as projects to which capital from home or locally may possibly be more or less attracted. And in such cases not only does it seem to me that pecuniary guarantees are unnecessary, but it appears reasonably open to question whether, in the interests of India, the State should not receive such lines which have fair remunerative prospects absolutely in its own hands. His question, however, does not arise in the present instance. If it did, I should not be prepared to admit the wisdom of a policy under which the Government should make over all its carefully selected paying lines to private enterprise, and construct all the unproductive lines by State agency. Rather than this, and for the benefit of the Indian taxpayer, I contend that it would be much better that Government should keep the construction and management of all lines in its own hands, so that the profits from the good lines may be taken as a set-off to the losses upon the bad; while, if all railways in India are eventually to be profitable—a possibility which all recent returns would apparently justify—the retention of such a property in the hands of the State seems to me in the financial position of India to be of the greatest importance.

For the present, however, as I understand the reference, the question is restricted to the consideration of the best means for securing the early completion of purely protective lines of railway; and, having regard to the real magnitude of this task, and the difficulties which have hitherto beset it, I have no hesitation in supporting the proposition that, if we are to do our duty to India in our efforts to secure it against famine, and to give effect to the urgent recommendations of the Famine Commission, there must be a change in the principles on which we are now making railways in this country. It requires no argument to show that, as long as we are limited to an expenditure of 2½ millions a year for the construction of productive public works by borrowed capital, and to a State prosecution of protective works, including irrigation, by direct expenditure which cannot exceed 75,00,000 rupees a year (the half proceeds of the famine insurance taxes), the outcome must be not only altogether incommensurate with the general requirements of the Government and of the country, but so tardy in its process that we run the serious risk of being overtaken in some quarter or another by the very evil which it should be the paramount duty of the Government to anticipate and prevent. If we could be assured against the recurrence of famine for 20 years, there possibly might be many advantages in the deliberate procedure which the limited capital at our disposal imposes upon us. But, if we may balance against the Parliamentary Committee's recommendations of a slow and steady progress in railway extension the facts which the Famine Commission's report, after inquiries in nearly every part of India, places before us, the conclusion is irresistible that, if we are prepared to meet very great emergencies, our advance in railway construction must be something much more rapid and thorough than our present policy permits.

In the Despatch to which reference has been made as laying down the principles by which our railway construction expenditure is to be based, it is ruled that protective works which are unremunerative are to be constructed out of revenue, and in the 11th paragraph of that Despatch the Secretary of State says "It appears to me that the appropriation of 750,000 l out of 1,500,000 l of insurance taxation for famine purposes will be sufficient for this purpose." Our contention is, as represented in paragraphs 5 to 8 of the Despatch of 22nd July, that under such a limitation it is quite impossible to provide adequate security against a great evil. The tracts of country which the proposed railways have to traverse are to be regarded more from our administrative exigencies and difficulties than from any other point of view, and, if India needs railways in such places to the extent of 3,000 miles, and if the direct outlay upon their construction is restricted to an amount which will complete about 80 miles per year, we incur a grave responsibility by adhering to a self-imposed difficulty. The readiest solution is afforded by a modified system of guarantee, and our proposal is—though it is scarcely enforced with sufficient emphasis in the 12th paragraph of the Despatch—that, in the place of allotting and spending 50 lakhs annually for the purpose under direct State agency, we should engage private enterprise to do the whole work at once on a guarantee limited to a certain number of years, the said guarantee being met by the 50 lakhs at our disposal. The idea seems to me eminently practical, and without any serious risks of financial embarrassment, and, having regard to the objects which the famine insurance policy contemplated, it presents, without any infringement of the conditions under which the famine insurance taxes were imposed, the most satisfactory escape from a great difficulty.

It is as well to recall the fact that that policy had for its object, by means of an annual surplus of 1½ millions, to place India in the position of being able to borrow 15 millions to expend on the prevention or mitigation of famine every 10 years, without any increase to the aggregate of her debt on that account. The manner in which, under Lord Cranbrook's orders, the distribution of this 1½ millions is regulated, while it directs that one moiety of it should be applied to the reduction of debt in England, leaves to the discretion of the Government of India the appropriation of the rest, for the extinction of debt, the alleviation of famine, or the construction of protective works. This proposal has so far found acceptance with the Government of India, that it has laid down that, while the first object to which this money should be applied is the relief of actual and existent famine, the second should be the construction of protective works, which, though not directly remunerative, are needed to prevent a probable future outlay in the relief of the population. Now the whole of these arrangements had their origin in the knowledge which had been acquired, after great and frequent calamities from scarcity, of the regular periodical recurrence of famines in India, and the whole object of the financial and legislative measures which followed upon this experience was for the relief, mitigation, or prevention of famines. I do not question that, if a famine was to arise in any year in a tract of country unapproached by a railway, it would devolve at once upon Government to devise measures for the succour of the population by the importation of food. But certainly, if we have learnt anything by the labours of the recent Commission, it is that, except in the most emergent cases, the form of such relief would not be gratuitous, and the very fact of the occurrence of a famine in any particular place would direct attention to the necessity of such works in that locality as would afford protection against future similar desolations. Our true famine policy, in a word, is to bring the foodgrain to the doors of the people, and to make them independent of agriculture for their incomes, so that they may have the means of buying foods when crops fail locally, and we do this much more effectually by promoting railways, which while under construction support the people, than by charitably feeding them when emergencies arise from the failure of harvests. In the one case at least we get the railway for our outlay, and in the other not only no permanent benefit to the country, but rather an impoverished population, taught to lean more than ever upon the aid of Government in their difficulties. Even if it be objected that this money cannot be diverted from its primary purpose in the relief of actual famine, it is scarcely necessary to point out that the present proposal affects only half of the amount raised under the licence tax and the public works cesses, and in the pressure of impending or existent famine the remaining moiety (which it is proposed to reserve for the extinction of debt) would be available for the promotion of direct measures of relief. The principle then upon which the suggestion of appropriating to this purpose the famine taxes rests appears to me incontestably sound; and, if it is sound, I would go further and say that, so long as the money market is as favourable as it is now, and the prospects of the season are good, it might with every advantage be extended to the whole of the million-and-a-half raised as an insurance against the risks of famine in India. When there is a threatening of famine, a year's warning is generally available, before there is any actual pressure upon the finances.

There is another point to which I would draw attention. It is not unlikely that we may have to meet the contingency of failure in our plans, by the unwillingness of capitalists to undertake some of the railways under notice, even with a Government guarantee. In such a case I conclude the Government, in view of the humane and wise policy of safeguarding the country against the miseries and costs of famines, would not abandon such projects. But, when private enterprise fails us, we, as a Government, should be placed in the same, or possibly worse, difficulty as regards the means at our disposal for protective railways, and in such circumstances I can see no objection to the procedure under

under which the Government should utilise a portion of the 750,000 L to pay interest on the capital borrowed for the construction of such railways by the State itself. The principle is the same, whether the money be used in payment of guarantees or in the payment of interest; and the object is the same in both cases, namely, to provide the readiest means by which an emergent want to India can be supplied in the quickest possible manner. The limitation of our borrowing powers to 2½ millions, and that especially as regards productive works under a system of State construction, was influenced chiefly by the consideration that India was incurring very great liabilities which her financial condition did not justify, but the Secretary of State, in maintaining this rule of limitation, recognised it as one of only temporary force, which he would be ready to reconsider at a fitting opportunity. The present condition of our finances, with the prospects of an exceedingly bounteous rainfall throughout the country, seems to me to present this opportunity, while the idea which is now before us of employing the proceeds of the famous insurance taxation to secure capitalists to make the railways, or (as I would add) to secure the capital to enable us to make them ourselves, removes, without drawback or disadvantage, the main difficulty which pressed upon the Committee of the House of Commons. We may be quite certain that in a vast continent like India no one policy will equally suit all times and all places, and it would be wiser on our part if, recognising this fact, instead of binding ourselves to a single system of procedure, we invoked private enterprise, under reasonable subsidies, to supplement rather than to supplant all State efforts in the construction of our railways. I contend that it is a fallacy to conclude that, in the conditions of this country, the rejection of railway schemes by private capitalists is any ground for their rejection by Government.

Apart from these considerations, no one can fail to notice and deplore the difficulties which have arisen from the continued changes in our railway construction policy. From guaranteed railways to partially subsidised private enterprise; from the latter to State railways constructed on borrowed capital, and the intermediate changes which have been rung upon the responsibilities of local governments to pay interest upon the advances made to them, there has scarcely been for five years consecutively any unity of purpose or finality of system. Outside of all this, even as regards the Government plan of administration, from the creation of a minister of public works to the appointment of a director, there have been within the last 10 years no less than five different forms of management of our railways, and the wonder is not simply that the whole business has not collapsed, but that the Public Works Department is able to show, notwithstanding these fluctuations in the Government policy and its indecision of purpose, the good results which we actually have in the extent and progress of railways in the country. If we are always to be looking behind the screen of the juggler to see how his mango tree is growing, we may be assured of his discomfiture, and for my own part I am optimist enough to believe that, if the Home Government would sanction our proposals on the lines of these suggestions, and would leave us alone for 10 years to carry them out, we should within that time have not only provided every security against the worst effects of famine, but should have promoted very extensively the prosperity and happiness of the people of India

Rivers Thompson.

MINUTE by the Honourable *E. Baring*, 25th July 1881.

1. SAVE on one point, to which I will presently allude, I concur generally in the Public Works Department Despatch, No 92 (Railway) of 22nd July 1881. As, however, the subject of which it treats is one of great financial importance, and one to which I have devoted a great deal of attention, I should wish to add some further observations beyond those contained in the Despatch

2. In dealing with this question, the first point which, I think, should be borne in mind is, that, so long as all railways are constructed by the State, the words "productive" and "protective" have special technical meanings, and that a hard-and-fast line separates the two categories of works. By a "productive" work is meant, in so far as railways are concerned, an undertaking which can be estimated to pay "within a maximum limit" of five years from the date of the line being opened for traffic, 4 per cent on the capital "invested, including therein all arrears of simple interest incurred up to that date, and "also the capitalised value of the land revenue and of leave allowances and pensions."* Such a work may be constructed out of borrowed money. By a "protective" work is meant an undertaking not necessarily directly remunerative, but obviously protective, in the sense of guarding against a probable future outlay in the relief of the population †. Such a work may not be made out of borrowed money. The capital expenditure requisite for its construction must come out of revenue

3. When private enterprise is substituted for State agency, the words "productive" and "protective" lose, to a great extent, their special technical meanings. No question arises as to whether the works in question are to be made out of money borrowed by the State,

* Secretary of State's Despatch, Financial, No. 1, of 6th January 1881, paragraph 8.

† Secretary of State's Despatch, No 62, of 20 February 1879, paragraph 18.

State, or are to be paid for out of current revenue. It is no longer necessary to draw a hard-and-fast line between "productive" and "protective" railways. Any railway, it may be assumed, even although avowedly made to protect the country against famine, will, to a certain extent, be productive in the ordinary, although perhaps not in the technical, sense of the word, that is to say, it will pay some percentage on the capital laid out in its construction. The aspect of the question is therefore somewhat changed. The point to be decided in each case is no longer merely whether a particular line falls into the productive or protective category, that is to say, whether it will or will not pay four per cent in five years, but to what extent it is likely to prove remunerative, and consequently on what terms private capital may be expected to undertake its construction. If the line in question presents such prospects of remuneration as would justify its construction by the State as a "productive" work, we ought to be able to get private capital to take it up without any State aid. If the line, although necessary for protective purposes, presents very poor prospects of remuneration, it is probable that its construction through the agency of private enterprise will be impossible, save under conditions which would be very onerous to the State. In such cases it will probably be desirable to continue the system of State construction, the capital outlay being found out of revenue. Between these two extremes a considerable variety of cases may present themselves, in respect to which the degree of State aid will vary according to the remunerative character of each particular work. Such aid need not necessarily take the form of guaranteeing a rate of interest. It may be found possible in some cases to enlist private enterprise by means of State aid which shall fall short of giving a guarantee. Thus the surveys may be made free of cost. The land may also be granted free. In some cases grants of waste land or mining rights may be accorded to a company. I should be very reluctant to give any guarantee, until it had been placed beyond all doubt that nothing short of a guarantee would ensure the construction of the line. But, if any guarantee is given, I think it should be on a fixed amount of capital, and should only extend over such a period as will enable the line to be constructed, and possibly in some instances, where the line passes through a country in a very backward state of development, for four or five years longer. In the event of the undertaking proving a failure, the full brunt of the failure should eventually fall on the company. The shareholders should look forward to a time, which should not be far distant, when the undertaking would be wholly self-supporting. Unless this principle be borne carefully in mind, they will not have that direct interest in the economical working of the line on which the Secretary of State rightly lays so much stress (Financial, No. 1, 6th January 1881, paragraph 2). It is no doubt very desirable that our railways should be constructed rapidly. Until they are constructed we must remain more or less exposed to all the worst effects of famine in the unprotected districts. Further, a rapid extension of the railway system is unquestionably the best means to ensure the development of the country, and notably to bring about that increase in the export trade which, for a variety of reasons, is so much to be desired. The desirability of enlisting private capital in Indian railway enterprise is now almost universally recognised.* It is, I think, pretty generally admitted that the circumstances under which the problem of railway construction in India may now be approached are materially different from those which obtained in 1869, and that the moment has arrived to reconsider the policy which was then adopted. If the capital cannot be raised on the exclusive security of the success of the undertaking, we may very properly fall back on the modified guarantee system, to which the Secretary of State alludes in the second paragraph of his Financial Despatch, No. 1, of 6th January 1881. But, in adopting this course, we must be very careful not to lapse again into the evils of the old guarantee system. Those evils were fully described in the correspondence which passed between the Government of India and the Secretary of State in 1869. I need not at present dwell upon them. I would, however, observe that not only, if we give too liberal terms to private companies, shall we take away from them their principal incentive to economical administration, but we shall incur the danger which is thus stated by the Famine Commissioners: "The obstacles that stand in the way of the investment of English capital in India, such as the climate, the distance, and the want of exact knowledge of the country, are still very great, and it may be feared that the disinclination to risk such investments has been rather increased than diminished by the system of giving a guarantee of interest at a high rate on the large capital of the great railways. So long as the opportunity was afforded to capitalists to make advantageous investments on a large scale on the security of the State, the inducement to attempt any enterprise without such security must have been greatly diminished" †

4. As regards the possibility of substituting private for State agency in the construction of railways in India, it is to be observed that we are now, to some slight extent at all events, better informed than we were a few months ago. We now know that it is possible

* See, *inter alia*, Lord Lawrence's Minute of 9th January 1869, paragraph 11, Secretary of State's Despatch, Financial, No. 267, of 31st July 1878, Report of the Select Committee of the House of Commons on Public Works, page xix, Mr Caird's letter to the Secretary of State, of 31st October 1879, Government of India Despatch to the Secretary of State, No. 28, of 8th June 1880, paragraph 15, Report of the Famine Commission, Part II, page 171, Secretary of State's Despatch, No. 1 (Financial), of 6th January 1881, paragraph 2, and Financial Statement for 1881-82, paragraphs 81-91.

† Report, Part II, page 175. See also some remarks made in the same sense by Mr Rathbone, in a debate in the House of Commons on 12th June 1879.

possible to attract first-rate English capital with a 4 per cent. sterling guarantee for five years, with the condition that the money advanced shall be repaid from the half-earnings in excess of 5 per cent., and the further condition that the Government reserves a right of purchase, on favourable terms, after the lapse of 30 years.

5 The original intention as regards the Jessor Railway, which formed the basis of the negotiations before I left England in last November, was that no guarantee whatever should be given. Subsequently a guarantee for five years was given, and more favourable terms of purchase were obtained for the State. For my own part, I should have preferred to have relaxed the terms of purchase and to have given no guarantee, but I am not at all dissatisfied with the bargain as it now stands. It is urged that the case of the Jessor Railway is exceptional, inasmuch as the undertaking promises to be more remunerative than most railways in India, and that, therefore, we cannot hope to get other railways made on such favourable terms. There may be some force in this argument, but it is impossible to say on what terms we can get the railways made until we try. I would, however, observe, as a consideration which to some extent counterbalances the argument based on the specially remunerative character of this railway, that the undertaking was altogether a novelty, and that considerable mistrust had heretofore prevailed as to the remunerative character of any Indian railway. It is not at all improbable, now that a start has been given under the auspices of so well known a firm as Messrs. Rothschild, that greater facility than heretofore will be found in raising the capital for similar undertakings. The numerous offers which during the last few months have been received, testify to the interest which has been awakened on the subject.

6. The experience of the past affords the best test which can be applied to the prospects of railway enterprise in the future. General Trevor's Administration Report (p 233) shows the total amount of railway capital invested in India up to the end of 1879, together with the per-centage of profits on capital expenditure in the case of each railway. Major Filgate has been good enough, at my request, to add the figures for the year 1880. I append a complete statement to this Minute (A).

7. It appears from this return that, up to the end of the year 1880, 128,000,000 £ had been invested in railways in India, of which 102,000,000 £ belonged to the guaranteed companies (including the East Indian Railway), 24,000,000 £ had been invested in State railways, and 1,300,000 £ in railways constructed in the native states.* Taken as a whole, the railways were paying in 1880 within a very small fraction of 5 per cent. on the capital outlay. The guaranteed railways paid 5.63 per cent., the State railways 2.43 per cent., the railways in the native states, 1.81 per cent. In the case of the guaranteed railways, the average rate of interest may fairly be taken as showing the general result. Most of these lines have been open to traffic for a long period. Only three of them are paying less than 4 per cent., namely, the Oudh and Rohilkhand (3.28 per cent.), the Madras Railway (1.77 per cent.), and the South Indian Railway (2.23 per cent.) But in the case of State railways the average is deceptive as a guide to future action. The capital expenditure on the Calcutta and South Eastern Railway (about 664,000 £) is included in the account. It may reasonably be assumed that a project of the nature of this line will not again be undertaken. Also, the Punjab Northern and Indus Valley Railways were avowedly undertaken for strategical purposes. Further, some of the lines are not yet completed, and others have been only very recently completed. It is to be observed that the Northern Bengal Railway paid during the year 1880, 3.20 per cent., the Tirhut line 4.49 per cent., the Patna and Gaya line, 6.66 per cent., the Muttra and Hathras line, 5.30 per cent.; the Rajputana line, 3.62 per cent.; and the Rangoon and Irawadi Railway, 4.23 per cent. I think it would be a good thing if the Public Works Department would cause to be drawn up in a concise form explanations in respect to the period at which each of these lines was commenced, their present stage of construction, with some further observations of a similar nature. If the table I have given in the Appendix, together with some explanations of the nature I suggest, were widely circulated both here and in England, it would, I think, be useful, as it would show investors the sort of prospect to be derived from embarking in railway enterprise in India. I am, of course, aware that there are numerous and very valuable reports on this subject. What, however, appears to me to be required is some short statement giving the leading facts, which will attract greater attention than the more voluminous reports intended for Government.

8 It appears to me that the figures given in this statement indicate that, although very large returns cannot, for the present, be expected from Indian railways, at the same time a fair prospect of moderate remuneration can be held out. I am aware that it is frequently said, and perhaps with truth, that the main lines having now been constructed, any further branches must be expected to be comparatively unremunerative. I would point out, however, that the profits of the Patna-Gaya and Muttra-Hathras lines seem to indicate that there is a fair field for remunerative branches, whilst the Northern Bengal and Rangoon and Irawadi Valley Railways appear to show that altogether fresh fields of railway enterprise may profitably be developed. On the whole, the conclusion to be drawn from these figures is, I think, that we may, with a moderate amount of State aid, hope to attract railway capital to India.

9. In

* These figures exclude the capital expenditure on the southern section of the Western Rajputana line.

9. In the 12th paragraph of the Despatch under consideration, it is proposed that any charge which shall be incurred on account of guaranteed interest in respect to the particular works mentioned in the Appendix attached to the Despatch, should come out of the 750,000 l a year, which it has been determined to devote to the construction of protective works. I venture to doubt the advisability of following this plan

10 It is to be borne in mind that the first object to which the whole sum of 1,500,000 l provided as an annual insurance against famine is to be applied is the relief of famine itself. This has been considered an essential part of the policy ever since the time it was first enunciated by Sir John Strachey. It was authoritatively reiterated in the financial statement for the current year (paragraph 68), and in our Despatch to the Secretary of State, No 30 of the 2nd February 1881, in which we dwelt on the general question of famine insurance. In the Secretary of State's reply (Financial, No 135 of 14th April 1881, paragraph 8) he states, in speaking of the application of 750,000 l a year to protective works, that "at any time when it may become evident that outlay will be needed in the actual relief of the people, it will, of course, be requisite for you to consider to what extent it may be necessary to restrict the grant for protective works, as for any other portion of your expenditure." If the famine grant, to the extent of 500,000 l, is locked up in the payment of guaranteed interest, it is clear that, when famine arises, the money for relieving it must, to the extent of 500,000 l, form an additional charge on the revenues of the year. It is perfectly true that, when famine actually arises, we must, in some way or other, find the funds for relieving it; and it may be said that it is a mere matter of account whether those funds, to the extent of 1,500,000 l, are in the first instance, found from the annual grant entered under the head of "famine relief, &c," whilst guaranteed interest is charged to another head of account, or whether the guaranteed interest is systematically charged to famine relief, &c, and the whole of the sum requisite for relief purposes, when actual famine occurs, is treated as an addition to the annual grant. Further, it may be said that, until actual famine occurs, the course proposed in the Despatch would be financially convenient. The money requisite to provide the guaranteed interest would not constitute any addition to our normal annual charges. But the whole question of the application of the money to be devoted to famine insurance has created so much controversy, and the arrangement which has now been made is so very recent, that I deprecate any further change, more especially as it does not appear to me that any change is absolutely necessary. The money required can, as I shall presently show, be found without touching the annual famine grant.*

11 This, however, is an argument based to a great extent, on political expediency. But other arguments may, in my opinion, be adduced against the course proposed in the Despatch

12 I am of opinion that the whole, or at all events very nearly the whole, of the 750,000 l to be devoted to protective works should be spent on irrigation and not on railways. My reason for entertaining this opinion is, that, unless we devote this sum of 750,000 l to the construction of canals and tanks, it appears to me very probable that these works will not be constructed at all. Without going into the vexed question of the degree of importance to be attached relatively to railways and irrigation works, it will, I imagine, be generally admitted that the latter, considered by themselves, are of very great importance. Mr. Card in his letter to the Secretary of State of 31st October 1879, has pointed out the great desirability of increasing the area of cultivable land in India. "The greatest difficulty," he says, "with which the Indian statesman is confronted is over-population, with constant increase, and his first and main duty will be to carry out a policy under which the people will be enabled to provide themselves with food. Every other consideration should be subordinated to this." Since Mr. Card wrote these remarks, the census returns have shown that the population is rapidly increasing. Whilst, however, the desirability of carrying out works of this nature is undoubted, it is equally certain that their construction, from the financial point of view, presents even greater difficulties than are to be encountered in the case of railways. The Secretary of State in his Despatch, Financial, No. 1 of 6th January 1881, paragraph 2, has said "It may be a question whether in the case of a canal used wholly for navigation an attempt should not be made to ensure its construction by private enterprise; but when, as is usually the case, canals are made either wholly for irrigation purposes or for irrigation and navigation combined, their construction must, as an almost invariable rule, devolve upon the State." I fully admit that for various reasons, into which I need not now enter at length, irrigation generally affords a less hopeful field for private enterprise than railways. I am inclined, however, not to abandon altogether the hope that some irrigation works at all events may yet be constructed by private enterprise, as was suggested by Mr. Card †. An offer made by a private company to construct canals in Sind was recently referred to us by the Secretary of State, and is now

* I ought to point out that the estimated expenditure, as given in the Appendix to the Despatch, is 18,370,000 l. (conventional sterling). The sum which it is proposed to set aside for guaranteed interest is 500,000 l a year. This would give only 2.73 per cent. on the capital to be raised. It is, however, improbable that the full maximum charge on account of guaranteed interest would ever fall on the Government.

† "Every facility and encouragement should be offered to private enterprise, either in the construction of railways, irrigation, internal navigation, or harbours, or in the development of mines, or in acquiring land for subsequent improvement, settlement, and sale."

under consideration. I admit, however, that we must look to State agency mainly to construct irrigation works. The Secretary of State has laid down, with respect to the inclusion of such works in the "productive" category, that greater latitude may be allowed in the case of railways. The period within which they should be calculated to pay 2 per cent on the capital invested is extended to 10 years from the date of the completion of the work. I should be sorry to see any further relaxation of this rule. If a work will not pay in 10 years, it is very questionable whether its construction out of borrowed money would be justifiable. On the other hand, it is certain that many of the canals which are most required cannot be brought into the productive category, even on the liberal terms of which the Secretary of State approves. For instance, the desirability of taking up the Sind-Sagar Doab project has recently been pointed out by the Public Works Department, I cannot doubt that the execution of this project would be most beneficial to the country, but it would be quite impossible, even under the most liberal construction of the rules, to include a scheme of this nature in the "productive" category. The unremunerative character of many of the canals, which have up to the present time been constructed, is well known.* Under these circumstances the course which I venture to advocate is, that we should gradually cease from borrowing altogether for irrigation works, save perhaps in some exceptional cases where their productive character is very clear, and that the 750,000 l to be devoted annually to protective works should be applied to irrigation. As I have already mentioned, there may be some few railways which presents such poor prospects of remuneration that their construction must necessarily devolve on the State. I think, however, that I may fairly assume that, if private enterprise were enlisted in the construction of railways, the whole, or very nearly the whole, of this sum of 750,000 l could be made available for the construction of canals.

13 I may remark as a subsidiary argument in favour of the course I advocate, that in time of famine canals are more suitable than railways as relief works. Any canals or tanks undertaken as protective works would very probably, in the event of famine occurring, prove precisely the works most suitable to be continued as relief works. Thus, when famine occurred, there would very probably be no necessity to make any change in the manner in which the 750,000 l was being spent.

14. If, however, it be found impossible to ensure the construction of the lines now under discussion by unaided private enterprise, or by private enterprise aided to an extent falling short of a guarantee, and if the 750,000 l is, as I propose, to be devoted to irrigation works, it may reasonably be asked how the money necessary to provide the guaranteed interest is to be found. My answer to that question is, that it must come out of the general revenues.

15 It is no doubt difficult to speak with confidence as to the possibility of inaugurating a policy under which railways will be rapidly constructed through the agency of private enterprise, until we know in the first place, on what terms we can enlist private capital, and, in the second place, what decisions will be arrived at on other questions intimately connected with the general financial situation † We must, to a certain extent, allow the

poli cy

* See Resolution of the Government of India in the Public Works Department of 29th April 1881, on the Revenue Report of Irrigation Works in Bengal for 1878-80. From this Resolution it appears that including indirect charges, the capital outlay in Bengal on canals up to the end of 1879-80, was about 5,267,000 l, and that the net revenue for 1879-80 gave a return of only 0.25 per cent on the capital invested. The Irrigation Revenue Report of the Bombay Presidency for 1879-80 (Statement B, page 12), shows that up to the end of that year the capital laid out on productive works, including indirect charges, was 927,000 l. The net revenue was 829 l, or 89 per cent on the capital. The capital outlay on irrigation and navigation works, not classed as productive, was 346,000 l, the receipts during 1879-80 amounted to 2,677 l, the working expenses to 3,082 l, the expenses were, therefore, 405 l in excess of the receipts. The figures for productive works do not include the Bagan Canal (capital outlay 117,000 l), the Eastern Nars Works (323,000 l), or the Krishna Canal (45,000 l). These works are all classed as productive, but the full report for 1879-80 on them has not yet been received. It appears, however, from the table on page 172 of the Finance and Revenue Accounts for 1879-80, that in that year they paid respectively 2, 1.2, and 2.2 per cent on the capital invested. I have not as yet seen the detailed reports for the other provinces, but it appears from the table on page 172 of the Finance and Revenue Accounts for 1879-80 that in the North-western Provinces the Ganges Canal (capital outlay, 3,025,000 l) paid 8.3 per cent, the Agra Canal (777,000 l) 2.6 per cent, the receipts of the Lower Ganges Canal (1,543,000 l) fell short by 1,211 l of the working expenses. In the Punjab, the Western Jumna Canal (892,000 l) paid 14.02 per cent, the Bari Doab Canal (1,495,000 l) 4.9 per cent, the Sirhind Canal (2,018,000 l) is not yet finished, the remunerative prospects of the Swat River Canal (112,000 l) are so bad, and the expenditure necessary to complete the work is so considerable, that it has been removed from the productive category. In Madras, irrigation has been very successful. The Godavari system (829,000 l) paid 15.1 per cent, The Krishna system (486,000 l) 10.5 per cent. The Pennar Ancient system (142,000 l) 7.0. The Cauvery system (total capital outlay unknown) gave a net revenue of 280,000 l. The Srivaikuntham weir project (121,000 l) paid 7.7 per cent. In the calculations made on page 172 of the Finance and Revenue Accounts, the indirect charges are excluded from the capital outlay.

† I will not now attempt to dwell on the numerous and important financial questions which are pending. It will be sufficient to indicate them. We shall have shortly to decide whether the license system is to be continued in its present or in an amended form, and generally whether a direct tax is to be incorporated with the permanent fiscal system of the country. The continuation of the famine cesses must also shortly come under consideration. The Secretary of State has drawn our attention to the opium question. Certain reforms in the customs tariff cannot long be delayed. The question of reducing military expenditure is being seriously considered, but we are as yet uncertain to what extent it will be possible to give effect

policy to develop itself as circumstances may require. The speedy construction of railways is, however, so essential to the development of the country and its protection against famine, that it may fairly be argued that their construction should not be made to depend upon the possibility of effecting certain fiscal reforms. There are two considerations which make me think that it will be financially safe to embark in a policy which involves a limited guarantee, in cases where unaided private enterprise will not come forward, and further, that the guaranteed interest may be charged to the general revenues, and not to the 750,000 £ which constitutes one-half of the annual famine grant.

16. The first of these considerations is, that if, as I propose, canals are paid for out of the annual grant of 750,000 £, and railways are made by private agency instead of by the State, it will no longer be necessary to continue to borrow 2,500,000 £ a year for productive public works. The annual increase of about 100,000 £ on account of interest on debt will, therefore, cease to accrue, and any surplus which may be realised may be devoted to the reduction of debt. So long as the opium receipts continue at about their present figure, the amount of surplus may be expected to be considerable.

17. The second consideration is, that whereas up to the present time railways have always constituted a charge upon the State, there is now every reason to expect that we are about to enter a period when they will no longer be a charge but a source of profit. The direct annual gain or loss to the State on account of railways from 1858 to 1877 is given on page vii of the Report of the Select Committee of the House of Commons on Public Works. Major Filgate has kindly added the figures for the last three years. I annex the statement to this Minute (B).

18. The railway receipts of the year are so much influenced by adventitious circumstances that it is difficult to deduce any precise law from the figures given in this statement. Nevertheless, I think that an approximate law may be deduced from them. Roughly speaking, if we exclude the two exceptional years, 1865-66 and 1866-67, it may be said that the net charge on the State went on increasing from 1858-59 until it reached its maximum (2,163,000 £) in 1872-73. It then began to decline. In 1873-74 it was 1,582,000 £. In 1874-75, 1,464,000 £. In 1875-76, 1,271,000 £. In 1876-77, 724,000 £. In 1877-78 there was, for the first time, a gain of 131,800 £. This was of course due to the large amount of traffic consequent on the famine. In 1878-79 this large amount of traffic had ceased, and the country was suffering from the depression and poverty consequent on the famine. The result was, that the railway receipts fell off, and the net charge on the State was 1,350,000 £. The average net charge on the State during the two years, 1877-78 and 1878-79, was 609,000 £, being less than the charge for any former year, except 1865-66. These two years may, however, be regarded as abnormal. In 1879-80 affairs got back into their normal state, and the charge to the State was 551,000 £ as against 724,000 £ in 1876-77. In 1880-81 the net charge was only 208,000 £, and I am informed that this figure, which is only the regular estimate, is too unfavourable by about 200,000 £. We have, therefore, now arrived at a point where receipts and charges are about exactly balanced. Any further improvement will, therefore, constitute clear profit. On the whole, I think it is not taking too optimistic a view, looking to these figures, to count on the net receipts increasing at the rate of about 200,000 £ each year*. It is a very different matter embarking in fresh enterprises when the railways, which are already constructed, constitute a charge upon the State, and when, on the contrary, they constitute a source of profit. The receipts from railways cannot be held to be taxation. It would, I think, be a very legitimate manner of employing surplus profits to devote them to guaranteeing interest on capital laid out in making fresh railways. Moreover, in dealing with this question, it is to be borne in mind that any fresh feeders which may be constructed will result in sending increased traffic on those lines which already exist, and thus increasing the revenue. I think, therefore, that, if unaided private enterprise will not come forward, we may with safety undertake fresh obligations in the way of guaranteed interest, more especially if we at the same time cease to borrow for productive public works. I am, of course, aware that a change of this sort cannot be carried out at once. The railways now in course of construction by the State must be finished. Only very recently sanction was given to the construction of the Rangoon and Toung-ngu Railway by the State at the cost of about 1,170,000 £. For my own part I should have much preferred an effort being made to

to the proposed reductions. The equalization and reduction of the salt tax is also a matter which calls for the early consideration of the Government. There is also the great question of exchange. So long as silver continues exposed to violent fluctuations in value, it is difficult to initiate with confidence any policy which involves either considerable fiscal reform or increased expenditure. Whether such fluctuations can, in the future, be avoided depends, to a great extent, on the issue of the negotiations which have been initiated as a result of the Paris Conference.

I may mention, as bearing on the immediate point under discussion, that there is good reason for supposing that a reduction in the duty paid on imported goods, or a reduction in the salt tax, would, especially if coupled with an extension of the railway system, lead to a large increase in consumption. The consumption of salt notably depends quite as much on facility of communication as on the rate of duty.

* The figures for the current year show that the net receipts of the guaranteed and State railways from 1st April to 11th June were 116,000 £, in excess of the corresponding period of last year.

to get this railway constructed by private enterprise. As the matter now stands, however, and unless arrangements be made to sell any of the partially completed lines to private companies, such lines must be finished by the State, and, to the extent of the capital required for their construction, borrowing by the State must continue. But I would not borrow any more than is required for these purposes, unless it be clear that the policy of enlisting private enterprise on moderate terms in the construction of railways is impossible of execution. Any new railway should, I think, if possible, be made by private enterprise, either unaided or with some small amount of Government aid.

19 The policy, therefore, I advocate is—

(1) To substitute private enterprise, with a minimum amount of Government aid, for State agency in the construction of railways,

(2) To devote the 750,000 L., which constitutes one half of the annual famine grant, to works of irrigation;

(3) To stop borrowing so soon as the works now under construction by the State are completed, and to devote surplus to the reduction of debt.

20 Experience alone can show whether it will be possible to carry out the whole of this programme. I see no reason why it should not be realised, but at present I put it forward merely as indicating the ends which, as it appears to me, we should seek to attain. The programme is of course subject to any modifications which, as time goes on, may appear necessary.

21. The proposal to apply the 750,000 L., which constitutes one half of the annual famine grant, to the payment of guaranteed interest, is manifestly not in consonance with this programme, and on that account it does not commend itself to my judgment.* I am fully aware of the responsibility which devolves on me in opposing a scheme which is supported by the high authority of his Excellency the Viceroy and the unanimous voice of my honourable colleagues. At the same time the subject is one to which I have given so much thought and attention, that I should be failing in my duty were I not to lay before Her Majesty's Government an alternative, and, as I think, preferable course of procedure. I have only to add that, should the Secretary of State decide that the policy advocated in the Despatch is to be adopted, I shall, so far as it depends on me, use my utmost endeavours to carry it out in such a manner as will ensure its producing a full measure of beneficial results.

22 There is one further point to which I should wish to allude. The Famine Commissioners (Report, Part II, page 171) say —“What is now urgently required is the supply “in the shortest time possible, of the cheapest form of railway which can be relied on as “being capable of carrying such a quantity of food grain as has been spoken of. To “secure these objects, it is essential that the first cost of the works shall be reduced to a “minimum, and that, while the construction is thoroughly durable, nothing shall be “attempted at the outset which may divert the available funds from what is strictly “essential to what is only desirable as affording increased convenience. The main object “in view is the provision of a substantial but cheap line fit for a comparatively small “traffic at moderate speed. The very careful restriction of the capital outlay is alike “necessary to ensure to the utmost the early completion of the lines, the reduction of the “whole cost to a minimum, and the working of the lines being soon rendered remunerative.” These observations should, I think, be very carefully borne in mind. What should be the nature of the rail, whether it is possible to dispense with ballast, and other points of a like nature, are matters upon which I can express no opinion. They must be left to the professional advisers of the Government on such subjects. But I may say that it appears to me that the lines which it is now proposed to make should be constructed almost entirely with a view to the transport of goods and third-class passengers. I would therefore cut down to the very lowest point expenditure on stations and first and second class rolling stock. On this subject I invite attention to some remarks recently made by
Colonel

* I am aware that it may be argued that only a matter of account is involved. The 500,000 L., which it is proposed to devote to guaranteed interest, may come out of the famine grant, and an equivalent sum be added to the annual irrigation grant, which would be paid out of the general revenue. Hence it may be said that the procedure in question does not necessarily preclude the attainment of the main object at which I am aiming, viz., the cessation of borrowing and the reduction of debt. In theory there is some force in the argument. In practice, however, I think that the arrangement I propose is preferable. The necessity of fixing the annual grant for irrigation has frequently been pressed on the Government. There is very much less chance that it will vary if the money comes out of the famine grant, the amount of which has now been settled after long discussions, than if it comes out of the general revenue. Moreover, I am tolerably confident that the burthen on the revenues will be less difficult to bear under the procedure I propose than under the alternative procedure. In the one case we should have to find 50 lakhs a year for irrigation, and continue to devote 75 lakhs to protective works in some form or another, for, after the pledges which have been given, this money could not be diverted to any other purpose. In the other case, the irrigation grant is ready to hand and the net charge on account of guaranteed interest which would fall on the general revenue would vary according to circumstances. I shall be much disappointed if it ever amounts to so large a sum as 50 lakhs in any one year.

Colonel Medley, R E, which appear to me to be worthy of consideration * I observe that the cost of 3,083 miles of railway is estimated in the Appendix attached to the Despatch at 18,350,000 *l* (conventional sterling) This is at the rate of about 5,950 *l* (59,500 rupees) a mile. The cost is not very high, but I trust that every endeavour will be made to reduce it still further by eliminating all expenditure which is not absolutely necessary to efficiency.

25 July 1881.

E. Baring

* Professional Papers of Indian Engineering, second series, No cccxlvii. Mr C Vincent, the Under Secretary to the Madras Government in the Public Works Department, has also recently published an interesting pamphlet on "Steam Tramways for India." His suggestions are I think, well worth considering. He estimates the cost of a tramway on the 5 feet 6 inch gauge at 2,600 *l* a mile, and on the 3 feet 3 $\frac{1}{2}$ inch gauge, 2,200 *l* a mile.

APPENDIX (A).

RAILWAYS.	Capital Expended, excluding Suspense Accounts.		Net Receipts.		Percentage of Expense to Earnings		Per cent. of Profits per Annum on Capital Expenditure	
	1879	1880.	1879.	1880	1879.	1880.	1879.	1880.
GUARANTEED.	Rs.	Rs.	Rs.	Rs.				
East Indian Main Line -	20,16,12,316	33,03,8,204	2,67,98,201	2,87,54,418	31 86	33-04	9-19	8 70
„ Jabalpur Line -	3,78,08,778				42-77			
Eastern Bengal -	3,42,84,355	3,45,85,309	24,33,530	27,24,310	45-97	44-81	7 10	7 88
Oude and Rohilcund -	5,61,92,646	5,81,44,361	18,19,936	19,04,010	58 11	57-25	3-24	3-28
Punjab and Delhi -	9,81,21,319	11,52,29,919	45,40,520	54,70,862	60-22	55 82	4-03	4-75
Sind -								
Madras -	11,05,95,560	11,08,55,385	20,75,170	19,57,136	68-68	68-24	1 88	1 77
South Indian -	4,09,09,354	4,16,72,968	10,63,252	9,30,018	68 38	73 87	2 60	2-23
Great Indian Peninsula -	24,86,83,445	24,99,77,200	1,01,90,601	1,11,05,951	59-64	55 49	4 10	4 44
Bombay, Baroda, and Central India	8,23,22,437	8,21,07,875	37,92,898	47,34,653	46-97	42 57	4-61	5 77
TOTAL - - -	1,00,04,33,200	1,02,29,71,306	5,49,96,836	5,75,81,358	48-10	49-52	5 50	5-63
STATE								
Calcutta and South Eastern -	67,39,408	66,39,843	44,999	40,753	66 44	40-21	0-67	0-61
Nalhati -	3,46,299	3,25,210	29,770	-3,728	67 57	105-23	8 60	-1 14
Northern Bengal -	1,90,96,004	2,00,98,632	1,25,120	6,43,509	90-96	60-10	0-06	3-20
Tirhut -	51,33,919	53,46,673	1,07,818	2 40,872	76-49	56 40	2 10	4 49
Patna-Gaya -	28,45,078	32,20,851	1,01,787	2,11,256	55 84	36 13	3 58	6-36
Punjab Northern -	2,45,80,202	4,05,28,373	3,78,889	5,64,171	79 52	83 25	1 54	1 39
Indus Valley -	5,70,01,762	6,03,17,427	6,17,459	19,22,399	81 16	71 15	1 08	3 19
Muttra-Hathras -	10,34,721	10,88,160	56,708	57,670	54-97	57 35	5 48	5-30
Rajputana -	3,09 43,568	3,40,61,947	11,79,167	12,33,305	66 74	66 38	3 81	3 62
Sindhia -	73,20,807	81,51,903	-31,772	24,109	134-95	88-05	-0-43	0 30
Western Rajputana (Southern Section)	(b)	(c)	6,754	(c)	85 87	(c)	-	(c)
Holker and Sindhia-Nimach	2,32,45,265	2,73,12,689	2,91,838	3,53,991	74 58	74 74	1-26	1 30
Wardha Coal (a) -	47,99,449	49,18,156	30,325	0,018	81 64	92 40	0 03	0 18
Dhond and Masnad -	95,38,053	1,04,58,463	-27,664	88,219	105-92	87 31	-0 29	0-84
Rangoon and Irawadi Valley	1,20,77,492	1,23,07,244	1,41,743	5,21,084	85 17	60-60	1 17	4-23
Cawnpore and Farrukhabad	-	27,08,300	-	-2,932	-	233-25	-	-0 11
Nagpur and Chhatargarh -	-	45,61,621	-	21,271	-	79 54	-	0 40
TOTAL - - -	20,47,01,337	24,20,45,011	30,52,931	58,89 253 (Sic)	78 15	70-88	1 49	2 43
NATIVE STATES.								
Gaekwar of Baroda's -	7,50,947	(c)	31,608	(c)	56-15	(c)	4-21	(c)
Khangson -	5 23,728	5,06,187	-264	4,257	140-09	84-42	-0 05	0-84
Amraoti -	4,05,095	4,34,261	16,176	7,429	76-88	88-41	3 17	1 71
Nizam's -	1,16,10,436	1,20,02,228	89,925	2,24,309	87-01	68 08	0 77	1 86
TOTAL - - -	1,33,50,436	1,30,04,676	1,37,445	2,35,995	82-00	69-93	1-03	1-81
GRAND TOTAL - - -	1,21,84,84,078	1,27,80,21,593	5,81,87,212	6,87,06,600	51-84	50 49	4 78	4-98

(a) Excluding colliery

(b) Capital Expenditure not shown in the Revenue Account.

(c) Revenue Account not received.

APPENDIX (B).

STATEMENT showing the Direct Annual GAIN or LOSS to the STATE from RAILWAY OUTLAY since 1858.

YEAR	GUARANTEED RAILWAYS.				STATE RAILWAYS				EAST INDIAN RAILWAY				TOTAL Loss or Gain to State.	
	Capital Raised to end of each Year.	Capital withdrawn for Expenditure to end of each Year	Net Traffic Receipts, less Mortgages of Surplus Profits paid to Companies	Guaranteed Interest.	Loss or Gain to State.	Capital Expended.	Net Traffic Receipts	Interest at 4½ per Cent	Loss or Gain to State.	Capital Expended.	Net Traffic Receipts, less Surplus paid to Share- holders	Interest and Annuity		Loss or Gain.
	£	£	£	£	£	£	£	£	£	£	£	£	£	
1858-59	22,008,405	19,151,631	232,365	888,411	606,046	-	-	-	-	-	-	-	-	606,046
1859-60	28,579,387	26,822,995	404,067	1,189,929	796,872	-	-	-	-	-	-	-	-	796,872
1860-61	34,897,817	33,901,710	989,413	1,485,748	1,000,362	-	-	-	-	-	-	-	-	1,000,362
1861-62	42,979,839	40,569,922	301,162	1,765,158	1,306,981	-	-	-	-	-	-	-	-	1,306,981
1862-63	46,218,841	43,397,308	626,615	2,166,756	1,541,140	-	-	-	-	-	-	-	-	1,541,140
1863-64	54,392,904	51,129,019	821,548	2,456,182	1,634,694	-	-	-	-	-	-	-	-	1,634,694
1864-65	57,541,917	55,245,159	1,129,861	1,693,787	1,563,996	-	-	-	-	-	-	-	-	1,563,996
1865-66	60,860,247	60,882,025	8,865,574	2,889,241	28,667	-	-	-	-	-	-	-	-	28,667
1866-67	67,258,917	68,179,728	2,347,085	3,031,087	684,069	-	-	-	-	-	-	-	-	684,069
1867-68	76,571,751	75,289,809	1,989,119	3,480,677	1,491,665	594	-	14	-	-	-	-	14	1,491,579
1868-69	82,417,005	79,187,736	2,229,509	3,881,018	1,651,504	552,992	-1,379	19,455	13,834	-	-	-	-	1,665,338
1869-70	91,426,816	89,910,587	2,827,941	4,126,025	1,498,084	724,862	-790	20,180	20,970	-	-	-	-	1,528,064
1870-71	91,426,816	87,086,857	2,556,707	4,341,609	1,784,902	1,193,234	68	43,586	43,617	-	-	-	-	1,828,419
1871-72	98,556,303	90,183,586	2,877,153	4,542,183	1,965,030	1,837,864	-4,063	68,199	72,263	-	-	-	-	1,787,292
1872-73	93,739,915	90,060,880	2,554,485	4,608,418	2,053,933	3,281,603	6,362	114,510	109,148	-	-	-	-	2,168,081
1873-74	94,726,814	91,355,893	3,241,189	4,617,923	1,376,734	5,805,138	-6,474	169,387	205,771	-	-	-	-	1,582,505
1874-75	95,119,118	92,441,724	3,454,848	4,645,931	1,389,039	6,620,398	44,982	320,095	276,113	-	-	-	-	1,484,166
1875-76	95,302,600	92,790,094	4,637,891	4,637,891	908,867	11,785,492	96,027	459,131	383,104	-	-	-	-	1,271,961
1876-77	94,833,189	94,188,059	4,433,151	4,668,621	295,530	14,651,358	88,921	587,525	499,904	-	-	-	-	724,434
1877-78	96,313,178	95,420,809	5,306,790	4,665,285	741,605	18,636,321	127,774	737,479	608,705	-	-	-	-	+131,800
1878-79	97,174,046	96,444,666	4,023,589	681,602	4,705,191	21,964,209	231,629	899,874	668,245	-	-	-	-	1,349,847
1879-80	97,969,284	96,829,909	3,974,645	4,716,340	741,895	24,644,702	335,497	1,068,160	724,669	-	-	-	-	651,601
1880-81	97,282,930	96,284,368	2,383,900	3,261,756	927,856	26,690,002	602,000	1,169,200	567,200	*37,354,248	949,154	34,307	+914,787	268,183
										682,200	9,800,000	1,513,127	+1,286,873	208,183
TOTAL	-	-	54,627,728	79,416,188	24,788,460	-	1,517,254	5,698,704	4,181,450	37,986,448	3,749,154	1,647,524	+2,201,630	28,768,280

The decrease in the transactions of the guaranteed railways in 1880-81, compared with the year immediately preceding, is due to the removal of the East Indian Railway from the category of guaranteed railways

* This sum is thus arrived at :-

(a) Capital of East Indian Railway at time of Purchase	-	-	-	-	26,200,000	(a) Of these amounts, 27,633,386 L will be redeemed by an annuity terminable in 1958, which annuity is entered in the column "Interest and Annuity"
(a) 2½ per cent premium thereon	-	-	-	-	6,560,000	
Debiture and Debiture Stock	-	-	-	-	4,450,000	
Outlay subsequent to Purchase	-	-	-	-	154,248	
TOTAL	-	-	-	£	37,354,248	

The figures in this statement agree with the Finance and Revenue Accounts. The whole of the Indian capital transactions of guaranteed railways down to the present time, and those of the revenue and interest transactions of the guaranteed railways down to the year 1878-79, the net traffic receipts of the guaranteed railways, and the portion of the guaranteed interest paid in India, have been converted into sterling at the contract rates of exchange. All other transactions are converted into sterling on the assumption that 1 L = Rs 10

No. 3.

DESPATCH to the Government of India, 8th December 1881, No 365 (Financial)

My Lord Marquis,

Paragraph 1. I HAVE considered in Council your Excellency's letter, dated the 22nd of July, No 92 (Railway), on the subject of the construction of railways as protective works, together with two Minutes by Mr Rivers Thompson and Major Baring, which were subsequently forwarded.

2 Referring to the portion of the Report by the Famine Commission which deals with the subject of railway construction, your Excellency observes that, of the 5,000 miles estimated by the Commission as the minimum extent of lines still necessary for the substantial protection of the country, you have strong grounds for believing that at least 3,000 miles will have to be constructed for protective purposes, there being no sure prospect of their yielding such a return within a reasonable time as to lead to their being classed, under the existing rules, as productive works, or as to tempt private capitalists to undertake them without State aid

3 The sum of money available from the revenues of the country for expenditure annually on protective works is 75 lacs of rupees, of which you consider that 25 lacs should be allotted to works of irrigation. The remaining 50 lacs will, on an average, suffice to provide about 400 miles of metre gauge railway in the course of every five years over which the operations may extend, according to which the 3,000 miles required would not be completed under 30 years.

4 You look upon it as quite out of the question to attempt to raise by taxation the sum needed for the construction of the 3,000 miles of protective railway "in the course of the next four or five years," and you are precluded by "the recognised policy of Her Majesty's Government and of Parliament" from raising the amount by loan. Nor, if you had the money, would it "be possible to do justice to the work in that time by "departmental agency alone."

5 Your Excellency, therefore, turns to the possibility of entrusting your "railway works to private enterprise under a safe and reasonable guarantee;" and, "in the existing state of the money market and the amount of money now seeking investment," you consider that you have "an opportunity for inducing capitalists to invest in public works in India, such as has seldom, if ever, existed before, and of which, in your judgment, it would be prudent to take early advantage, in order to obtain the acceptance of terms of guarantee, which, while giving the capitalist security for the small rate of interest his money can command in the open market, shall not unduly burden" your revenues.

6. You accordingly recommend that private capitalists should be invited to undertake the construction of the protective lines, for which reconnaissances are being made, upon a guarantee of interest limited both in amount and in duration. The interest to be paid under this scheme may, in your opinion, be fairly charged against the 75 lacs a year allotted to the construction of protective works, and you, therefore, propose to provide the funds in that manner, a course by which you consider that you will be keeping strictly within the prescribed limits of public works expenditure, and you trust that you may receive at as early a period as may be possible my sanction to these principles of public works policy

7 In an appendix to your Excellency's letter, a list is given of five systems of lines on the metre gauge, comprising a length of 3,083 miles, the construction of which is estimated roughly to "cost about 1,835 lacs of rupees, or 15,300,000 £ sterling at the "exchange of 1 s. 8 d per rupee"

8 I observe in this correspondence that, although reference is more than once made to the instructions regarding the outlay on protective works contained in the 11th paragraph of my Despatch of the 6th of January 1881, No 1 (Financial), no allusion is made to the orders of 1879 (therein quoted as being re-affirmed), and the suggestion of using the provision for famine insurance as interest, instead of capital outlay, is treated as if it had now for the first time been presented to the Government of India.

9 In a letter from the Government of India, dated the 16th of September 1878, No. 354 (Financial), it was explained that there was a class of works which could not be classed as productive, but which were needed to give protection against famine, and it was proposed to accept a yearly maximum dead-weight charge for productive and protective works, which charge, it was thought, might for the next five years be fixed at 25 lacs of rupees, in addition to existing net liabilities of this class, by which sum it was accordingly proposed to reduce the famine insurance surplus. Although the exact method of accounting for the expenditure is different, the proposal appears to me essentially the same as that now submitted by your Excellency, except that the agency for the construction of the works was to have been that of Government officers instead of so-called

private enterprise, and that the maximum additional burden on the revenues was to be 25 instead of 50 lacs annually. Lord Cranbrook, in his reply of the 20th of February 1879, No. 62 (Financial), declined to sanction "any loan for outlay on protective works, or any expenditure on them beyond what may be met from the receipts from the special taxation recently imposed." He then proceeded to convey his sanction to the appropriation of 750,000*l* annually to the "extinction of debt, to the relief of famine, or to the construction of protective works," outlay on which was permitted, by his Lordship's further Despatch of the 13th of November 1879, No. 444, to be in addition to the amount spent on productive works.

10 I am unable to concur with your Excellency in the opinion above referred to, that the course which is now proposed would be consistent with the instructions on public works expenditure which have been given from time to time by successive Secretaries of State, and which were recapitulated in my Despatch of 6th January 1881.

11 The object of those instructions was to limit the expenditure of borrowed money to such works as could, under certain rules, be defined as reproductive, and even upon such works to an average annual amount of 2½ millions, and to lay down that works which did not fall within that category should be constructed only out of revenue, for which purpose half the amount of the famine insurance provision has since been permitted to be applied.

12 Under these instructions the increase to the public debt of India incurred for the construction of public works was restricted within certain narrow limits, and it was hoped that security was obtained that it should not permanently be increased at all.

13 Your Excellency, while desirous to conform to the limits thus prescribed, appears to consider that they will not be transgressed by the policy now proposed. But I have to point out that a guarantee of interest, upon a capital estimated to amount to 1,835 lacs, would impose a liability on the revenues of India which was certainly not contemplated when the Despatch of 6th January was framed, or when the instructions, of which it was a summary, were issued. It is true that it is proposed that the guarantee should be limited in amount and duration, and much depends on the sense in which those limitations are understood. But, when I observe that all the lines which it is thus proposed to entrust for construction to guaranteed companies are lines designated as protective, that is to say, lines which cannot be reasonably expected to offer a return of 4 per cent within four or five years from completion, it is impossible to expect that capitalists of standing would be found ready to embark their capital on other terms than the promise of a somewhat heavy and lengthy guarantee. Neither can it be overlooked that, at the expiration of such a period of guarantee, there would be a powerful moral obligation on the Government, if the undertaking should prove to be unremunerative, to come to the assistance of a body of shareholders whom it had induced to enter on a philanthropic undertaking for the benefit of the people of India, knowing at the time that the line was not one which could be constructed on commercial principles. The assumption of a liability of this character, certain for a considerable period and subsequently undefined, appears to me to differ not very greatly from the direct increase of indebtedness which it has been the object of recent instructions to avoid.

14 In the second paragraph of my Despatch of 6th January, I stated my views on the employment of private capital in the construction of railways in India. They were, that capital should be raised on the exclusive security of the success of the undertaking, and, if this were found impracticable, that a system of modified guarantee might be adopted, which was defined as one so restricted as to time and rate of interest as to give the subscribers a real interest in the efficient and economical administration of the railway.

15 It is, I think, clear, on a consideration of these observations, that it was the investment of private capital in undertakings the principal attraction of which was their prospect of commercial success, which I had in view, and that this policy differs widely from one which would tempt capitalists to invest, not on the commercial advantages of the undertaking, but mainly on the prospects offered by the Government guarantee.

16 Acting upon the foregoing principles, I have had great satisfaction in approving the concession which has been made to the Central Bengal Railway Company. It may be a question whether the limited guarantee which has been given in that instance was absolutely necessary, and whether the capital might not have been obtained without it. But, as your Excellency is aware, it was considered so important that the first trial of this policy should be made under favourable conditions, that I am not disposed to regret the liberality which was displayed in regard to that company. There can, however, be no doubt that in this instance it was the anticipation of commercial success which was the main inducement to the promoters. More than one proposal for the construction of railways by private companies is now before your Excellency's Government, in a position more or less advanced, and will, when brought before me in a definite form, receive my most favourable consideration.

17 But it appears to me that it is of the essence of this policy that the proposals should proceed from the capitalists themselves, and that they should not be made by the Government.

Government to the capitalists I can conceive nothing more injurious to the success of the policy of enlisting private enterprise in the development of railway construction in India, than to lay before the public a large scheme of railways avowedly of an unremunerative character. Such a course would, in my opinion, infallibly stimulate unreasonable demands, and would place a serious obstacle in the way of obtaining favourable proposals for other undertakings.

18. In short, while I continue to look with some hope to the policy of the development of remunerative public works in India by private capital, and possibly to the substitution of this agency for that of the Government by means of borrowed funds, I am unable to regard it as a suitable agency for the completion of those lines which are indicated by the Famine Commission as necessary for the protection of the country against famine, though uncertain in their prospect of pecuniary profit. For the completion of these lines I can look to no other agency than that of the Government itself.

19. As to the rate at which it may be possible for the Government to undertake their construction, while I am by no means disposed to admit that the true interests of India will be best secured by the construction within the next few years of 3,000 miles of unremunerative railways, I concur with your Excellency in regretting that the limits now imposed should delay their progress to the extent which is pointed out in your Despatch.

20. Until it is possible to form a more certain estimate of the financial position of the country, I feel compelled to withhold my sanction from a more rapid outlay than the existing rules permit. But those rules were confessedly of a temporary character, imposed in a financial condition of the country which inspired grave alarm, and which cannot be said to have as yet absolutely passed away.

21. It follows from this general statement of the opinions which I entertain on the subjects of the encouragement of private enterprise, and of the development of protective railways, that I am not at present disposed to give a final decision on the question, which has given rise to a difference of opinion in your Excellency's Council, of the source from which such guaranteed interest as it may be necessary to provide should be supplied. To formally allocate a sum of 500,000*l.* for the purpose from the famine insurance provision would, in my opinion, be inconsistent with the intentions with which this provision was made, and would, I apprehend, give rise to unfounded expectations as to the amount of assistance which the Government is prepared to offer, and I should prefer that the nature of this assistance should be decided in each case as it arises.

22. It may, however, be reasonably hoped that the financial condition of the country may soon admit of a more free expenditure on public works. The cessation of the operations on the north-west frontier of India has afforded great relief to the finances; and, if the fiscal system of the country is placed on a really sound footing, and an adequate surplus of revenue secured, it may, I trust, be feasible to devote larger grants of money to the development of the more backward districts, without the fear that the burden thereby imposed upon the people of India is increasing more quickly than is justified by the results, or than the population can bear without undue pressure.

I have, &c
(signed) *Hartington.*

— No. 4. —

LETTER from the Government of India, 23rd January 1883, No 29 (Financial)

My Lord,

We have the honour to address your Lordship on the general question of our Railway policy.

2. During the last two years the Railway policy of the Government of India has been unsettled. We do not think that this is any matter for surprise or for regret. In inaugurating a policy under which Railways should, to some extent at all events, be constructed through the agency of private enterprise, it was almost inevitable that there should be a period of transition during which it would be exceedingly difficult to adhere to any fixed policy. It was easy to declare beforehand the broad aim which the Government sought to attain, viz., the construction of Railways through the agency of unded private enterprise. But experience alone could show how far that aim was attainable. It is now clear that the present condition of things is open to considerable objection. In the absence of any very clearly defined principles for our guidance, each case has to be considered on its merits. The result of this state of things is that there is a risk of drifting unawares into the adoption of measures which may prove a source of future embarrassment. We have now had two years' experience of the private enterprise policy. During that time a certain number of facts have been accumulated which, we think, are sufficient

to enable us to lay down a definite policy at all events for the immediate future, say for five years.

3. We shall not attempt to discuss the question of whether, as a matter of principle, railways should be constructed by the State or by private agency. We shall assume that your Lordship approves of the policy of constructing railways through unaided private agency. We think it may also be assumed that the main portion of the capital necessary to their construction must come from England. Every facility should, we think, be given to local capitalists to subscribe. The greater the proportion of the money which can be obtained locally, the better from every point of view. But we conceive that nothing is more certain than that the local money market will not, by itself, yield all, or nearly all, the capital required, and that therefore recourse must be had to the more extended money market of London.

4. Our Public Works policy must, of course, in a very great degree, depend upon our financial position. We need not at present describe that position at any length. We will only say that two points must at the present moment be borne especially in mind. The first is that our standard of value is unstable, and that the price of silver, on which its variations mainly depend, shows a downward tendency. The second is that the opium revenue is precarious and shows a tendency to diminish. Under these circumstances, the Government should, in our opinion, exercise caution in incurring any fresh liabilities. Great as is the importance we attach to the speedy development of the railway system, we are not prepared to recommend for the attainment of this object the adoption of any measures which are likely to lead to an increase of taxation. We should regard increased taxation as a greater evil than relatively slow progress in railway construction, more especially in the case of those railways which are not urgently required as a protection against famine.

5. We have one further preliminary observation to make. It is sometimes argued that the State should not look to railway profits as a substitute for taxation. As a matter of abstract principle, there is much to be said in favour of this view. On the other hand, the full and immediate application of this principle to the Indian financial system appears to us to present insuperable difficulties. We are not, for the moment, considering the railways which will be constructed in the future, but only those railways which are already constructed, or in course of construction, and in which the State already has a direct pecuniary interest. Looking to these railways only the state of the case is as follows. They have cost the taxpayers of India about 25,000,000 *l*. (see paragraph 122 of Financial Statement for 1882-83). They are now beginning to yield a profit. There is very fair reason to suppose that that profit will be considerable. Looking to the facts connected with opium and exchange, we think it not impossible that the practical necessities of the financial situation may oblige us to treat these profits as a substitute for taxation in the immediate future. In fact, in this, as in many other branches of the Indian fiscal system, the most we can do is to recognise the course which is economically the most sound, and to endeavour gradually to conform to it. But the practical necessities of the situation may not infrequently oblige us to postpone the full application of our principles.

6. A great deal has, on previous occasions, been written and said as to the policy which it is desirable to pursue in connection with the construction of railways in India. We do not, however, propose to dwell at any length on the past history of the question. A series of new facts have been accumulated, with the result that we are now approaching the question under somewhat new auspices.

7. It will, however, be convenient, in view to the further elucidation of the question, if we state very briefly the main facts in connection with our existing policy.

8. The last formal and complete declaration of Public Works policy is contained in Lord Hartington's Despatch (Financial), No 1, of 6th January 1881, in which various earlier orders of 1878 and 1879 are summed up. Of this policy, the principal points were that—

1st. Irrigation works, which "must, as an almost invariable rule, devolve upon the State," might be undertaken out of borrowed money or surplus revenue, provided that they would within 10 years return four per cent interest on the capital outlay; otherwise, they must be paid for out of revenue (*i. e.*, out of a portion of the 750,000 *l*. conditionally allowed for protective expenditure under 31, *Famine Relief and Insurance*, or by direct grants under 33, *Irrigation and Navigation*).

2nd.—Railways should be constructed, (1) by unaided private enterprise, to the utmost possible extent, (2) under guarantees of limited amount and duration, when unaided enterprise was unobtainable, (3) by the State, out of borrowed money or surplus revenue, provided they would within five years return four per cent interest on the capital outlay, out of the 750,000 *l*. above-named, if they would not give such return, but were "protective," and under special arrangements, if made under pressure of war or actual famine.

3rd.—"Productive" expenditure must be limited to an *average** of 2,500,000 *l*. per annum of borrowed money, plus any actually realised surplus revenues of preceding years.

4th.—Surplus

* That is to say, portions of the 2½ millions unexpended in one year may be added to the normal amount for the next.

4th—Surpluses so expended must be counted as debt transferred from the "ordinary" to the "productive" account, and care must be taken not to increase the permanent establishments so as to be burdensome in years when no surplus is available

An expectation was, moreover, held out that at some future time the limit of 2,500,000 *l.* might be extended, if financial circumstances should improve.

9 It soon became apparent that these restrictions, however necessary and appropriate under the circumstances of the day, would seriously interfere with a class of works which the Report of the Famine Commission, then only lately issued, brought into a position of primary importance, namely, those needed for protection against famine, and especially railways. The difficulty was stated in our Despatch, No. 92 R, of 22nd July 1881, in the following words—

"Those restrictions embrace limitations as to the amount to be borrowed and stringent conditions as to the remunerative character of the largest portion of the works to be undertaken; and the result, is that, practically speaking, as will be presently shown, 50 lakhs a year is all that is now at the disposal of our Government for the construction of those lines of railway which do not fulfil the conditions prescribed by your Lordship for Productive Public Works, but which are, nevertheless, of the greatest importance in their bearing upon the prevention of famine—both directly as channels for the importation of food into vast and populous districts, otherwise inaccessible to supplies from other parts of the country in times of scarcity, and indirectly as developing natural resources now latent, and giving rise to new industries and to the diversity of occupations created by an enlarged trade, to which we must look as an important safeguard against famine."

We proposed, as a way out of the difficulty, the construction of 3,083 miles of protective railways, at a cost of 18,355,000 *l.** by private enterprise, which was to be attracted by guarantees, limited in amount and duration according to the varying circumstances of each case, and met from the 500,000 *l.* set aside for railways out of the Famine Grant of 750,000 *l.* per annum

10 This proposal, which was practically a development, by means of capitalising the Famine Grant, of the Secretary of State's suggestion in his Despatch, summarised in paragraph 8, that railways should be constructed under guarantees of limited amount and duration in cases in which unaided enterprise was not obtainable, was objected to by Lord Hartington (No 365 (Financial) of 8th December 1881), on the ground that the guarantee, and not the profitableness of the project, would be the attraction to private enterprise, and that, when it failed, the State might find itself morally bound to relieve the shareholders of unproductive undertakings in which they had embarked at its solicitation. Protective railways, his Lordship again ruled, must be constructed by Government agency, if no other was obtainable on commercial principles, but a general hope was expressed that more funds might ere long be available for them.

11 The present position, therefore, is this. Private enterprise has begun to look seriously at Indian railway projects. The Bengal Central Railway has been commenced under the system of a simple "limited guarantee," and the Bareilly-Rambagh Railway has lately been floated on an analogous basis †. The Southern Mahratta Railway has been taken up under a new form of such guarantee, in which the company contracts to find the money and work the line for a full guarantee during construction and a partial one subsequently, the line remaining the property of Government, and either party being free to terminate the compact under certain conditions. Moreover, the Patna-Baratch, or Bengal and North-Western, Company has been formed, and two or three minor projects are just being started by other companies, with no Government aid, except the free grant of land. Finally, the Bhopal-Gwalior, the Mymenagch-Dacca-Chittagong, the Ranaghat-Bhugwangola and the Nagpore-Barrakur projects are being negotiated for, and other large undertakings are inquired after. But the whole of the above are enterprises giving more or less promise of fulfilling the "productive" conditions at no distant date. What appears, therefore, not unlikely to occur in the event of the money market recovering itself from the distrust of Indian railway projects which appears to have somewhat unexpectedly arisen during the last few months, and again becoming generally favourable, is that, while the means of making protective railways will remain as inadequate as ever, those provided for really productive lines will scarcely be required.

12 This position seems to indicate the necessity of inverting the regulations hitherto

in

* The figures throughout this Despatch are given in conventional sterling (*Rs* 10=1 *l.*) unless the contrary is specially mentioned

† Under the "limited guarantee" system as applied to these railways, the State gives nothing except the land. It guarantees 4 per cent until opening of the line or the expiration of a very short term of years, whichever may first occur, but it recoups all outlay in this respect, with interest thereon, out of half of surplus profits above 5 per cent. Finally it reserves a right of purchase at stated intervals, and a partial reversion of the property at the end of 99 years. The transaction, strictly speaking, is nothing but an advance repayable by instalments, and the "guarantee" exists only in name.

in force, of applying the loan funds in aid of the Famine Grant to unproductive, but protective, lines, and leaving to private enterprise all such as are sufficiently profitable to attract it

13 This, therefore, is the corner-stone of the policy we now advocate. We consider that instead of continuing State agency for the construction of productive lines of railways, we should, for the future as far as possible, exclude the action of the State altogether from this field of enterprise, and that, as a general rule the Government should only undertake the construction of railways which, from their unprofitable character in a commercial sense or other causes, cannot be made by private agencies

14 A good deal might be said in favour of this policy from the point of view of abstract principle. It will, however, be sufficient for our present purpose if we look wholly at the practical issue which is involved. And the practical issue is this—that the adoption of this policy, for the time being at all events, will alone permit of the speedy construction of those railways which are urgently required as a protection against famine. The desirability of constructing such lines with the least possible delay has never, so far as we know, been called in question by any one who can be seriously considered as an authority on Indian questions. We do not think that the case is at all too strongly stated by Sir John and General Strachey in the following passage from their recently published work.—

“Year after year runs silently by, and the fatal term will only too soon be reached when another terrible catastrophe will suddenly arise, though exactly where and when we know not. It is in the intervals of prosperity which are granted to us that we must prepare for the inevitable future; and if the lessons of the past still continue to be neglected, the responsibility for the consequences will rest upon those who, having the power to avert them, have failed to do so. For any hesitation or delay in carrying out the works which alone can give the country the protection it requires, there is no valid argument to be found * * * judicious expenditure on these works will certainly supply the only assured means of preventing frightful mortality and ruin, and of avoiding the future waste of millions on ineffectual famine relief with no corresponding benefit to the country, and such works, while thus affording protection in time of difficulty, will constantly increase the resources of the people, and render them more and more capable of resisting pressure when it arises. Past experience, both in what we have done and what we have left undone, points to these conclusions”—(*Finances and Public Works of India*, page 403)

To point this moral, we have only to recall the sad effects of the want of the Rajputana-Malwa Railway in 1869, and of the Southern Mahratta and Western Dekkhan Railways in 1876-78

15 It is, however, of the highest importance to consider how far it may be financially possible to give effect to the policy we advocate. It is to be borne in mind that the new policy, if it be adopted, involves a complete reversal of the policy which has obtained during the last few years. The essence of the present policy is that the railways constructed by the State should, generally speaking, be self-supporting. The essence of the new policy is that the railways constructed by the State need not, and often will not, be self-supporting. It is sufficient to state the facts thus, in order to show that the change of policy will materially affect the general financial position of the Government, and it becomes of the highest importance to inquire whether the change may be made with a due regard to financial prudence

16 It is obvious that some limit must be assigned to capital expenditure from funds borrowed by the State on unprofitable lines of railway. A policy which involved borrowing to an indefinite amount in order to construct such lines must almost infallibly lead in the end to most serious financial embarrassment. The possibility of giving practical effect to the policy depends, indeed, mainly on the amount of money which it is proposed to sink in investments which are not calculated to yield a rate of interest equal to that at which the Government of India is able to borrow. This rate may be taken at 4 per cent. per annum.

17 With a view to the solution of this question we have caused two schedules to be drawn up, which we append to this Despatch (Appendix I). Schedule A contains a list of the “Railways indispensable for protective or other urgent purposes, to be completed or made by the State or other agency on its behalf, and State railways under construction.” Schedule B contains a list of “Railways to be left to private enterprise.” It is with Schedule A that we are for the moment more particularly concerned.

18 It will be observed that this Schedule comprises 4,055½ miles of railway, estimated to cost 29,851,000 *l*. Out of this, however, 218½ miles of line, estimated to cost 2,299,000 *l*., will be opened during the current financial year (1882-83), leaving 3,837 miles, estimated to cost 27,552,000 *l*. to be completed in future years.

19 It will also be observed that Schedule A. is divided into five sub heads, as follows —

	Miles.	£
a—Capital to be raised and interest paid by the Government of India - - - - -	1,206½	7,727,000
b—Capital to be raised by Government of India, interest paid by Provincial Governments - -	585	3,493,000
c—Capital to be raised by "construction and working" Companies, interest to be paid by Government of India - - - - -	437½	3,749,000
d—Capital payable from Provincial balances, no interest charge - - - - -	124	353,000
e—Capital to be raised by private Companies under "limited guarantee" system - - - - -	1,484	12,330,000
TOTAL - - - - -	3,837	27,652,000

20 From this arrangement it will be seen that we contemplate the employment of three different sorts of agencies to be utilised in the construction of the lines in question

21 The lines under sub-heads (a), (b), and (d) would be made by direct Government agency 1,915½ miles of line, estimated to cost 11,573,000 l, are comprised in these three categories

22 Under sub-head (c) will be found three lines, viz. —

	Miles	£
1. Saharanpur-Roorkee-Moradabad, with branch to Hurdwar - - - - -	134	1,500,000
2. Bankapur-Harhar - - - - -	50	800,000
3. Poona Belgaum (Western Deccan) - - - - -	253½	1,949,000
TOTAL - - - - -	437½	3,749,000

23 The most convenient agency for the construction of the first-named of these three lines will evidently be the Oude and Rohilcund Company. Indeed, the line is already under construction by that Company on behalf of the Government, and debentures to the extent of 500,000 l have already been raised in anticipation of a satisfactory "construction and working" agreement being eventually concluded with the Company

24 The most convenient agency for the construction of the Bankapur-Harhar and Poona-Belgaum lines will evidently be the Southern Mahratta Company

25 For these reasons we have placed these three lines in a separate category

26 Four projects, considering the Lalitpur-Katni and Katni-Bilaspur projects as one, are included under sub-head (e), viz. —

	Miles.	£
1. Ranaghat-Bhugwangaola - - - - -	92	310,000
2. Bhopal-Jhansi-Gwalior and Jhansi-Cawnpore - -	385	3,500,000
3. Barrakur-Nagpore - - - - -	627	4,500,000
4. Lalitpore Katni-Bilaspore - - - - -	380	3,420,000
TOTAL - - - - -	1,484	12,330,000

27 We propose that these lines should be constructed on the Central Bengal terms, if terms no better, on the whole, than those* can be obtained. We are reluctant to concede those terms in the case of any railway, but some special reasons apply for conceding them in the case of the projects mentioned above. As regards the Ranaghat-Bhugwangola extension of the Bengal Central Railway, we believe that negotiations, on the basis of the original terms conceded to the Company, are already far advanced. The other three lines are so important, especially from the point of view of protection against famine, that we are prepared to make some concessions, of which we should not approve in the case of other lines less urgently required, in order to ensure speedy construction.

28 If we proceed on the assumption that the lines mentioned in Schedule A are to be completed in five years, commencing from 1st April 1883, the figure of 27,552,000 *l* given above (paragraph 19) does not represent the whole amount which would be required during that period. On the one hand, a sum of money has to be provided for stores which must remain in stock after the lines are completed, and for the capital outlay on existing State and guaranteed lines. On the other hand, 500,000 *l* may be deducted on account of the contemplated sale of the Nagpore-Nandgaon line, to which allusion is made in the column of remarks under the item *Barrakur-Nagpore*.

29 The total amount of money which it will be necessary to provide will, therefore, stand thus.—

1 To be provided by Government (a), (b), and (d), less recovery of 500,000 <i>l</i> . under (e)	11,073,000
2. Additional for surplus and working stores	530,000
3 Additional outlay required on open State Railways	1,500,000
Total Expenditure through the direct Agency of the State	13,103,000
4. Capital outlay on East Indian Railway	1,500,000
5. Ditto on existing guaranteed lines	1,500,000
6 Ditto by "construction and working" Companies under (c)	3,749,000
Total Expenditure by Companies on behalf of Government	6,749,000
7. Capital outlay by Companies on their own account under (e)	12,280,000
GRAND TOTAL	32,082,000

30. We have now to consider the annual charge which would devolve on the Government in consequence of the expenditure of this sum of money.

31 The greater portion of the money required would have to be borrowed either directly by the Government itself or by companies, some of which, viz., those under sub-head (c), would act on behalf of Government, whilst others, viz., those under sub-head (e), would act on their own behalf, and would only acquire a temporary right to Government assistance. There are, however, two sources from which funds would, to a certain extent, be provided, and in respect to which no interest charge would be incurred. These are (1) the provincial balances, (2) the annual grant of 750,000 *l* for protective works, of which 500,000 *l*. is at present available for railway expenditure except in years of famine.

32 As regards the provincial balances, it will be seen that under sub-head (d) we have provided for a sum of 353,000 *l*. to be expended during 1883-84 and subsequent years on lines now actually under construction. The closing provincial balance of 1881-82 was taken in the regular estimate as 3,267,600 *l*. It proved, however, to be 3,705,130 *l*. The closing provincial balance of 1882-83 was estimated at 1,600,000 *l*. It will probably be at least 2,000,000 *l*. Of this sum by far the largest amount belongs to the North-Western Provinces Government. Under these circumstances, we think we may safely assume that in addition to the 353,000 *l* stated above, the Provincial Governments will be able to spend 500,000 *l*. on railways from their balances before the close of the year 1887-88. This brings the total under this head up to 853,000 *l*.

33 Turning to the question of the amount which will be available from the annual grant of 500,000 *l*. for protective railways, it will be necessary to explain at some length our proposals in connection with this branch of the subject.

34 We have already mentioned (para. 27) that we propose that the lines included in Schedule A, under sub-head (e) should, if necessary, be constructed under the Central Bengal terms. The Ranaghat-Bhugwangola line, which is included in this category, is not

* For further observations about these terms, see paras. 63-65

not a protective railway. For the moment, therefore, we exclude it from our calculations, there remain the other lines, estimated to cost 11,420,000 *l.*, which are protective railways of the highest importance.

35 It may be argued, and we admit with much force, that the money, paid in the first instance by the State under the Central Bengal terms, cannot be regarded as a guarantee, in the sense in which we have been accustomed to employ that term; that, in fact, it is only an advance which will eventually be repaid to Government. There is, without doubt, a very fair probability of all the lines immediately under discussion eventually paying over 5 per cent., and in that case the whole of the money advanced by Government in the early stages of the undertaking would be eventually repaid. A long time may, however, elapse before the money is repaid, and in the meanwhile the guaranteed interest cannot be treated as an advance. It must certainly be charged to revenue, with the result that an additional charge will, for the time being, be thrown upon the Government. According to the best estimates we can frame, the estimated net charge on account of the three lines now under discussion will be as shown in the subjoined table —

	1883-84	1884-85	1885-86	1886-87.	1887-88.	1888-89.
	£.	£	£.	£	£.	£
Interest - - -	50,000	120,000	230,000	320,000	400,000	460,000
Land - - -	35,000	45,000	20,000	10,000	5,000	—
Total Charges - -	85,000	165,000	250,000	330,000	405,000	460,000
Less Net Revenue -	—	7,500	40,000	80,000	150,000	300,000
Net Charge to State -	85,000	157,500	210,000	250,000	255,000	160,000

36 It will be observed that these charges are considerable, and we are not prepared to recommend that, in addition to the charge for borrowed money on account of the other railways mentioned in Schedule A, and in addition to the annual famine protection grant, we should incur such a heavy charge for guaranteed interest.

37 Under these circumstances, we think that the only chance of getting these lines constructed speedily will be to revert to a proposal somewhat analogous to that which was made in our Despatch of 22nd July 1881, that is to say, to allow the charge for guaranteed interest to be debited to the annual grant of 750,000 *l.* for protection against famine. The result of this will, of course, be that the amount available for capital expenditure from the famine grant will be diminished to the extent of the outlay on guaranteed interest.

38 We are aware that two different proposals of a somewhat similar kind have been before your Lordship's predecessors, namely, in 1879 and in 1881, and that on both occasions they have been rejected.

39 We will, in the first instance, make some remarks on Lord Cranbrook's Despatch, No 62, of 20th February 1879, to which special allusion is made in paragraph 9 of Lord Hartington's Despatch (Financial), No 365, of 8th December 1881. Lord Hartington then observed that the proposal made by the Government of India in July 1881 appeared to him to be "essentially the same" as that to which Lord Cranbrook had taken exception. However this may be, we venture to think that there is a very wide difference in the proposal now made and that to which Lord Cranbrook took exception in 1879. The gist of that proposal is contained in rule 3, paragraph 19, of the Government of India Despatch, No 354, of 19th September 1878. It is couched in the following words —

"The total net yearly charge imposed upon the revenue of India for the maintenance and payment of interest on the capital invested in Public Works of all classes after setting off the income they produce, shall not, until the end of 1883-84, exceed the corresponding net yearly charge at the present time by more than 25 lakhs of rupees."

If we understand the proposal rightly, it was intended that in calculating the net yearly charge the guaranteed lines, which in 1878-79 were worked at a loss of about 681,000 *l.*, were to be left out of account. Circumstances have entirely changed since this proposal was made. The railways were then being worked at a loss. They are now yielding a profit.

40. Further, we gather from paragraph 17 of Lord Cranbrook's Despatch of the 20th February that the main reason which made Lord Cranbrook reject the proposal of the Government of India at that time was a consideration of the financial position of the moment —

"The events of the last few months," he said, "and their effect on our financial position, have, however, compelled me to reconsider the question of Public Works expenditure, and I propose to address your Excellency in another Despatch on this subject. In the meantime, however, I deem it necessary to express the opinion that the present condition of the finances does not justify any loan for outlay on protective works or any expenditure on them beyond what may be met from the receipts from the special taxation recently imposed."

It will be borne in mind that this was written during the Afghan complications and at a time when the country had only recently recovered from the severe famine of 1877-78. We are far from wishing to take too optimistic a view of the financial position of the moment, but we do not, at the same time, think that there is anything in that position which would render it necessary for us to reject a moderate proposal of this sort under which large tracts of country will be speedily protected against famine.

41. Turning now to Lord Hartington's Despatch of 8th December 1881, it is to be observed that the present proposal differs also in some important points from the proposal which was then under consideration. The proposal then made by the Government of India was to expend 18,355,000 *l.*, and to "give guarantees of interest, limited both in amount and in duration." Nothing specific was laid down as to the amount or duration of the guarantee, as it was held that "each concession should be dealt with by itself on its own merits." But the proposal covered, and, indeed, was intended to cover, a guarantee of interest extending beyond the period of construction. The proposal now made is to expend only 11,420,000 *l.* in this manner, and to guarantee a rate of interest not exceeding 4 per cent. during the period of construction only. Further, the amount so spent is to be repaid out of half profits over 5 per cent. Under these circumstances, and in view of the necessity, to which we have already alluded (paragraph 6), of re-considering the whole question, it is not impossible that your Lordship may be inclined to view with favour a proposal such as that which we now put forward.

42. There is, however, one further important point in connection with this proposal which requires consideration. It will be borne in mind that the present famine insurance policy is based upon the assumption that 15,000,000 *l.* will be spent by the Government of India every 10 years in the relief of famine. Hence it was argued that, if 1,500,000 *l.* a year is provided as an insurance against famine, the financial position at the close of the decade will be in equilibrium. We need not follow all the lengthy discussions which have taken place upon this subject. It will be sufficient for us to say that, in 1879, Lord Cranbrook directed that 750,000 *l.* should be applied to the reduction of debt, and 750,000 *l.* to the construction of works which should protect the country against famine. This arrangement has often been criticised, and we are quite free to admit that, logically speaking, the original proposal, which was to apply 1,500,000 *l.* either to reduce debt or, which is much the same thing, to diminish the amount of the annual borrowings for Productive Public Works, involved a more consistent financial policy, and one of which the soundness was more capable of arithmetical proof. The financial defence of Lord Cranbrook's policy rests upon the hypothesis that the money spent upon protective works will either prevent famine or will render its relief less costly when it occurs. The extent to which money will have been saved by the construction of a canal or railway when famine occurs is not capable of proof, but we may say that, although perhaps it is less logical, we think on the whole, Lord Cranbrook's policy is more beneficial to the country, and is preferable to that which was originally proposed.

43. Under the present arrangement, however, it is understood that the 750,000 *l.* a year now devoted to Protective Works will, when famine occurs, no longer necessarily be spent on those works, but will be available for the relief of famine whenever it occurs. If now a portion of that money be, as we propose, devoted to the payment of interest on certain lines of railway, it is clear that the whole amount of 1,500,000 *l.* cannot, so long as these payments continue, be available for the relief of famine. To the extent, therefore, of the amount of guaranteed interest, the deficit in the famine year will, under our proposal, be liable to be increased. This argument is true enough, but we think it admits of an effective rejoinder. In the first place, if famine occurs, it is by no means improbable that it will occur in the very tracts in which the proposed lines are to be made, for it is those tracts of country more than any other which are exposed to famine. Under these circumstances, it would obviously be undesirable to stop the progress of works, which would afford excellent opportunities for giving employment to the people. In the second place, we have always considered that, even if no change be made, it will be well nigh impossible to count upon the whole of this 750,000 *l.* as available for the relief of famine in famine years. In time of famine what would almost certainly occur would be this. The Financial Department would address the Public Works Department and inform them that the 750,000 *l.* was no longer available for Protective Works. The Public Works Department, on the other hand, would almost certainly reply that to

stop

stop these works and to disperse the establishment collected would involve a great waste of public money, and they would strongly urge that, having arranged their plans for an annual expenditure of 750,000 *l*, those plans should not be disturbed. Under these circumstances, the Financial Department would almost certainly have to yield and to provide for the relief of famine as well as for the usual Protective Grant of 750,000 *l*. Further, it may be said that to stop any works employing a large number of persons would in time of famine be next to impossible, even outside the districts actually suffering from famine. The effects of a famine extend in many ways far beyond the localities where the scarcity actually exists, and to throw men largely out of work at such a time anywhere would be open to grave objection. We really think, therefore, that the change now proposed, so far as this particular point is concerned, is more one of form than of substance. In the third place, it is to be borne in mind that under the very reasonable hypothesis that all these lines will eventually pay more than five per cent, the whole of the money advanced during the period of construction will be ultimately repaid. The sum so repaid should be credited to the famine grant, and thus, after a series of years, the whole of the money would come back to us.

44 Reverting now to the figures given in para 35 it will be seen that under our proposal we estimate that a total sum of 957,500 *l*, or say, in round numbers, 1,000,000 *l*, will be required up to the end of 1887-88 to meet the interest charge on the Protective Railways comprised in sub-head (e) of Schedule A. The amount available for capital expenditure on railways in five years from the Protective Grant would, therefore, be reduced from 2,500,000 *l* to 1,500,000 *l*, or, which is the same thing, on an average 300,000 *l*, instead of 500,000 *l* a year, would be available for such expenditure.

45 In paragraph 29 we estimated that the total amount required for capital expenditure on railways during the next five years was 32,082,000 *l*. We have shown (paras. 32 and 44) that, in estimating the annual charge, the following sums, which will not bear interest, must be deducted —

	£	
1 To be provided from Provincial Balances - - - -	853,000	
2 To be provided from Famine Grant - - - -	1,500,000	
£	2,353,000	

The figure of 32,082,000 *l* is thus reduced to 29,729,000 *l*. Further, we have shown (paras 34-44) how, by capitalising a portion of the Famine Grant, the money may be provided for making the protective railways in sub-head (e) of Schedule A., estimated to cost 11,420,000 *l*, without incurring any charge beyond that which is now included in our annual estimates of expenditure. Deducting this sum of 11,420,000 *l* from 29,729,000 *l*, there will remain 18,309,000 *l*. It remains to be considered how this amount of money can be provided and at what charge to the State.

46 Although the greater portion of the lines in Schedule A. are unremunerative in the sense of not presenting sufficient attraction to enlist unaided private enterprise in their construction, it is not to be for one moment supposed that they will yield no return at all on their capital outlay. The Rangoon-Sittang, and the Ranaghat-Bhugwangola lines, for instance, will almost certainly prove "productive" in the sense in which we have heretofore been accustomed to employ that term. We append to this Despatch a statement (Appendix II) showing the net revenue, *i.e.*, in this case, the gross receipts, minus the working expenses and exclusive of charge for interest, which we may expect to derive from all the lines in Schedule A., excepting the three protective lines under sub-head (e) with which we have already dealt. From this it will appear that the net revenue from these lines during the next five years may be estimated as follows —

	£	
1883-84 - - - -	34,000	
1884-85 - - - -	79,500	
1885-86 - - - -	149,500	
1886-87 - - - -	240,000	
1887-88 - - - -	330,000	

If these calculations prove correct, the interest charge in each year would, of course, be reduced by the figures given above.

47 On the other hand, we think, in a matter of this sort, the most prudent plan to adopt will be to take a pessimist view of the situation, and to base our forecast of the future on the maximum charge which it is possible, under our proposals, can be incurred by the Government. That charge is four per cent on 18,309,000 *l*, or 732,360 *l* a year. We propose that the question of selling any of the existing lines, which belong to the State, or in which the State has a pecuniary interest, should, generally speaking, for the present at all events, be postponed, so that the profits from existing lines may be made to

cover the interest charge for the construction of the relatively unprofitable lines, which under our proposal the State would now undertake

48. We append to this Despatch a statement (Appendix III) from which it will appear that the estimated net revenue during 1882-83 of lines which are now open for traffic is as follows.—

Guaranteed lines - - - - -	£	3,472,500
State lines - - - - -		3,695,300
Total - - - - -	£	7,167,800*

49 We have also caused a forecast to be made of the estimated net revenue of each of these lines up to the year 1887-88, from which it will appear that in 1887-88 the estimated net revenue is as follows —

Guaranteed lines - - - - -	£	3,730,000
State lines - - - - -		4,394,000
Total - - - - -	£	8,124,000

50 It appears, therefore, that the estimated net revenue in 1887-88 is 956,200 *l* in excess of that during the current financial year. This is 223,840 *l* in excess of the maximum charge (732,360 *l*) which could be incurred under our proposal. This margin of 223,840 *l* will be more than sufficient to cover the charge on account of those portions of the Southern Mahratta and Central Bengal Railways which are not included in Schedule A. The maximum charge on account of the excluded portion of the Southern Mahratta Railway is four per cent on 3,000,000 *l* (true sterling), or 120,000 *l* (true sterling). The maximum charge on the excluded portions of the Central Bengal Railway is four per cent. on 1,250,000 *l* (true sterling), or 50,000 *l* (true sterling)

51 We do not attach any exaggerated importance to forecasts of this sort, but we may say that the estimate of future receipts in this case does not certainly err upon the side of optimism. We shall, indeed, be much surprised if the actuals do not turn out much more favourable than the estimate. So far as the expenditure is concerned, on the other hand, it is inconceivable that the maximum charge, on which our calculation is based, should ever devolve on the State.

52 In a matter of this sort, however, we rely more upon the actual experience acquired in the past than upon any forecasts for the future. As was mentioned in the last Financial Statement (para 122), the net charge on account of railways reached its maximum (2,163,000 *l*) in 1872-73, since then the charge has been steadily diminishing, as the following figures will show.—

1872-73 - - - - -	£	2,163,000 -
1873-74 - - - - -		1,582,000
1874-75 - - - - -		1,464,000
1875-76 - - - - -		1,272,000
1876-77 - - - - -		724,000
1877-78 - - - - -		+ 132,000
1878-79 - - - - -		1,350,000
1879-80 - - - - -		651,000
1880-81 - - - - -		+ 7,000
1881-82 - - - - -		+ 1,109,000
1882-83, Budget Estimate - - - - -		+ 261,000

53 It will be observed that in 1877-78 the railways for the first time yielded a net profit (132,000 *l*.) This was due to the large amount of traffic during the famine. In the following year, 1878-79, when the country was suffering from the effects of the famine, the net charge was heavy (1,350,000 *l*.) If we balance the abnormal receipts of the year 1877-78 against the abnormal losses of 1878-79, it may be said that since the year 1872-73, the net charge to the State has been steadily diminishing, until during the year 1880-81 the railways yielded a net profit of 7,000 *l*, which, in 1881-82, rose to 1,109,000 *l*. We may mention that it is now certain that the actuals for 1882-83 will turn out considerably better than the estimates.

54 Taking

* These figures are taken from the Budget Estimate for 1882-83. The Actuals will almost certainly be in excess of that estimate.

54 Taking all these circumstances together, we think that if we borrow 18,309,000 *l* for the construction of railways during the next five years, we may feel confident that the increased charge on account of interest will be more than covered by the increased receipts on account of the railways we already possess. If this were not the case, the policy would, we think, be very questionable, for we should not be prepared to recommend any course which would involve increased taxation.

55. We have next to consider the amount which it will be necessary to grant annually under 37, *Productive Public Works*, in order to give effect to this programme in five years.

56 In connection with this question we beg to recommend that anything contributed by the provincial governments out of their balances should be considered as an addition to the grant under 37, *Productive Public Works*. At present, under instructions from your Lordship's predecessors, this cannot, in all cases, be done. The consequence is (1) that any contribution from the balances to a productive public work which the Imperial Government is constructing merely takes the place of an equal portion of the 2,500,000 *l* per annum, which is, consequently, not borrowed, and the provincial government derives no additional benefit from its contribution, and (2) that the amount of such contribution may reduce the grants out of the 2,500,000 *l* made by the Imperial Government to other provinces.

Vide Despatches from Secretary of State, No 426 of 23rd October 1879 para. 5, and No 444 of 13th November 1879, para. 10

57 If this be done, the figures, for the purposes of the present calculation, will stand as follows —

	£.
Amount to be provided under (a) and (b) in Schedule	
A less recovery under (c) - - - - -	10,720,000
Additional for surplus and working stores - - -	580,000
Additional outlay required on open State Railways -	1,500,000
	12,750,000
Deduct contribution from provincial balances (<i>vide</i> para 32) - - - - -	600,000
	12,250,000
Total railway expenditure - - - - -	12,250,000
Add for irrigation (700,000 <i>l</i> a year for five years) -	3,500,000
GRAND TOTAL - - - £	15,750,000

58 This would involve an average expenditure of 3,150,000 *l* a year for five years in order to carry out the programme. A portion of this money will, however, be provided from the annual grant from *Protective Works*. We have estimated (para. 44) that, under our proposals, 300,000 *l* a year will, on an average, be available from this source. If this calculation should prove correct, the total amount which it would be necessary to provide under 37, *Productive Public Works*, during the next five years would be reduced from 15,750,000 *l* to 14,250,000 *l*, or an average of 2,850,000 *l* a year. The precise amount must depend upon the accuracy of the calculations made in para 35 of this Despatch. It is on every ground very desirable that the Public Works Department should know beforehand exactly what sum of money they will have at their disposal. Under these circumstances we consider that the best plan will be to practically cumulate the two grants under 37, *Productive Public Works*, and under 31, *Famine Relief and Insurance, Protective Works*, so far as railways are concerned. As regards irrigation, we propose no change in existing arrangements. The Public Works Department will dispose annually of 950,000 *l*, viz., 700,000 *l*, under 37, *Productive Public Works*, and 250,000 *l*. under 31, *Protective Works*, plus any unspent balance from former years, and in addition to whatever may be granted under 33, *Irrigation and Navigation*. So far as railways are concerned, we consider that a sum of 2,450,000 *l* should be placed annually, for the next five years, at the disposal of the Public Works Department, plus any contributions made by the provincial governments from their balances. When the Budget Estimates for each year are framed it will be ascertained how much is available for capital expenditure from the protective grant. The difference between this sum and 2,450,000 *l* should, we consider, be provided under 37, *Productive Public Works*. Of course all the money expended under 31, *Famine Relief and Insurance*, will be shown as spent on *bonâ fide* protective works. This will not involve any difficulty, as most of the railways in Schedule (A) come strictly within this category.

59 Having dealt with all the questions which arise in connection with Schedule (A), we now turn to Schedule (B), which comprises the "Railways to be left to private enterprise," 3,497 miles of line, estimated to cost 24,044,000 *l*, are included in this Schedule. Before proceeding to deal with this branch of the subject it is necessary that we should make some general observations on the subject of the construction of railways through the agency of private enterprise.

60 We are not at all disappointed with the results that have been attained so far in the initiation of a policy under which railways should be constructed through the agency

of private enterprise. It is, perhaps, sometimes forgotten that only two years have elapsed since that policy was first started. It must be remembered that previous to that time the idea of constructing railways through the agency of unaided private enterprise in India was deemed to be wholly impracticable. A scheme (the Bengal and North Western line) has now actually been launched on the London money market, under which the Government gives no guarantee of interest, but only the land free. On the other hand, the Government receives half profits over 6 per cent. This scheme, however, has not been received in such a manner as to render it probable that similar terms will, for a time at least, be obtained in future cases. We do not think that we should allow ourselves to be too much discouraged by the temporary check which the private enterprise policy has apparently received. It is, however, incumbent upon us to inquire into the causes which have led to the unfavourable reception accorded to the Bengal and North Western project.

61 It is possible that certain minor details in the Bengal and North Western contract, such as the conditions as regards carrying mails, &c, discouraged investors. As regards all these points, we will only say that we think, in the future, every reasonable concession should be made in order to make the terms acceptable to the public.

62. But these points, so far as we can gather, are, relatively speaking, of slight importance. The main reasons which appear to have led to the unfavourable reception given to this project are,—

- 1.—The absence of any Government guarantee.
- 2.—The provision under which the Government is to divide with the company the profits over 6 per cent.

63 We will, in the first instance, deal with the second of these two points. When the arrangements with the Bengal and North Western Railway Company were under consideration, a telegram was sent to us by your Lordship's predecessor, asking us whether we had any objection to a division of the profits over 6 per cent between the Government and the Company. We replied that we had none. We think, that as regards this point, we must retrace our steps. We think for the future our policy must be to abandon any idea of making a direct profit out of the lines to be constructed through the agency of unaided private enterprise.

64 The first point, however, namely, the Government guarantee, is probably of greater importance, and we have been informed that the absence of the guarantee contributed materially to depress the price of the Bengal and North Western Stock. The question therefore, really is, shall we revert to what has been termed the "limited guarantee" system? We are decidedly of opinion that, as a general principle, we should not do so. Having made provision for such railways as are indispensable, but which, owing to their unremunerative character, cannot be constructed by unaided private enterprise, we think that we should leave the field clear, and whilst we abandon all idea of taking any part of the profits, we should also refuse to give any pecuniary assistance to any companies which may be formed, beyond giving the land free. The charge for the land in the cases of these railways would be debited to 32, *Railways*, and would be in addition to the expenditure discussed with reference to Schedule (A).

65 Whilst thus considering it undesirable to extend the limited guarantee system to any of the railways in Schedule (B), we think that the debit to capital of interest during the course of construction, in the case of those railways, is quite unobjectionable and, indeed, very necessary.

66 It remains to be considered whether power should be reserved to the State to purchase the railways, whether those made by unaided or by aided private enterprise. We think that, on the whole, such a power had better be reserved. A railway will often constitute a natural monopoly, and, if the monopolists abuse their position, it may be in the interest of the community that the State should have the power to purchase their property, not necessarily with a view to keeping it in the hands of Government, but more probably with a view to selling it again under different conditions. The conditions of purchase, as well as the time after which the right can be exercised, might form the subject of negotiation in each case. As regards the period, 30 years seems to us to be a suitable term. As regards the conditions, we think that they might form the subject of negotiation in each case, but we may say that we would not insist on too favourable terms.

67 The main proposals contained in this Despatch are, therefore, as follows —

(1) That our future policy should be to leave those lines which are most commercially attractive to private enterprise, and to construct, either directly, through State agency, or indirectly, through the agency of either "construction and working" or "limited guarantee" companies, those lines which are, relatively speaking, unprofitable, but which are indispensable for protection against famine or other urgent purposes.

(2) That the Railways to be constructed through one or other of these last-named agencies during the next five years should be those named in Schedule A. (Appendix I) attached to this Despatch.

(3) That

(3) That the total amount of money to be spent on Railway construction during the five years, commencing from 1st April 1883, should be 32,082,000*l*. This amount is made up of the following items —

	£.
1 To be provided under Sub-heads (a), (b), and (d), less recovery of 500,000 <i>l</i> under (e) - - - - -	11,078,000
2 Additional for surplus and working stores - - - - -	530,000
3. Additional outlay on open State Railways - - - - -	1,500,000
4 Additional outlay on East Indian Railway - - - - -	1,500,000
5 To be borrowed by "construction and working Companies" under (c) - - - - -	3,740,000
6 To be borrowed by "guaranteed Companies" for open lines	1,500,000
7 To be borrowed by Companies under the "limited guarantee" system (Central Bengal terms) - - - - -	12,230,000
TOTAL - - - - - £	32,082,000

(4) That negotiations should be continued with the Oudh and Rohilkhand Company with a view to the construction of the Saharunpur-Moradabad line, with a branch to Hurdwar, and with the Southern Mahratta Company, with a view to the construction of the Bankapur-Harhar and Poona-Belgaum (Western Dekkhan) lines

(5) That negotiations, some of which have commenced, should be continued with companies to construct the lines comprised under Sub-head (e) of Schedule (A) on terms explained in para. 27 of this Despatch.

(6) That the interest charge, if any, for the construction of the three protective lines mentioned in Sub-head (e), viz. —

- i.—Bhopal-Gwahar-Jhansi and Jhansi-Cawnpore,
- ii.—Burrakur-Nagpore,
- iii.—Bilaspur-Katni-Lalitpur,

should be debited to 31, *Famine Relief and Insurance*.

(7) That the sums provided from provincial balances should be considered as an addition to the annual grant under 37, *Productive Public Works*. The amount so provided is estimated at 853,000*l* during the next five years.

(8) That the amounts annually available under existing arrangements for irrigation purposes under 37, *Productive Public Works*, and 31, *Famine Relief and Insurance*, should remain unchanged. These amounts are,—

	£.
Under 37, <i>Productive Public Works</i> - - - - -	700,000
Under 31, <i>Famine Relief and Insurance</i> - - - - -	250,000
TOTAL - - - - - £	950,000

(9) That the amount to be placed annually at the disposal of the Public Works Department, for railway construction under 37, *Productive Public Works*, and 31, *Famine Relief and Insurance*, should be 2,450,000*l*. This amount is to be provided in the first instance by utilising the balance which remains over from the grant of 500,000*l* for protective works after paying the interest charge, if any, for the three protective lines mentioned under Sub-head (c). The remainder is to be provided by a grant under 37, *Productive Public Works*. The total annual grant under this head would, therefore, within certain definite limits, be fluctuating. It would probably have to be increased from 2,500,000*l* a year to an average of 2,950,000*l*, of which 700,000*l* would be spent on irrigation and 2,150,000*l* on railways.

(10) That, except in respect to the lines mentioned under (4) and (5), private companies should receive no pecuniary aid from the State beyond the grant of the land free of cost. The money so spent should be debited to 32, *Railways*, and will be in addition to the 32,082,000*l* mentioned above (3). On the other hand, such companies should be allowed to debit to capital the interest charge during the period of construction.

(11) That the system of deriving any direct profits out of the lines made through the agency of unaided private enterprise should be abandoned.

(12.) That the question of the sale of lines, already in the hands of the Government, should, generally speaking, be postponed until the process of borrowing money for the construction of unremunerative lines ceases

(13.) That, in respect to all railways made by companies, the State should reserve to itself a power, to purchase the lines, under such conditions as may be agreed upon in each case

68. When this programme has been carried out it will be for the Government of the day to reconsider its position by the light of the circumstances of the time being. But we may say that we trust that it will then be possible to stop State expenditure on railways altogether, to leave the further development of the country to private enterprise, and to introduce a scheme for the reduction of debt.

69. We think the principles which we have advocated above will cover almost every case which will come before us, and we think it is very desirable it should be fully understood that, having once decided on our policy, we shall adhere to it for the next five years. "Exceptional cases" will not be permitted. It may, however, be that some few cases may occur, for which these principles do not altogether provide. For instance, in Madras, a proposal was made, not long ago by a local fund committee to guarantee interest on a small local railway. We think that in cases of this sort we should not interfere with the free action of local committees. Further, some concessions may be asked in respect to mining rights. These, we think, must be decided on their own merits when they arise.

70. In saying that we think that no change should be made for five years in our policy, when that policy has once been authoritatively settled, we do not, of course, mean to say that it will be possible to adhere to every detail of the present programme. Thus, some of the lines which, under our present proposals, are classed as Imperial, may eventually be made by the provincial governments, or, on the other hand, some of those classed as provincial may be made by the Imperial Government. Again, it may be possible and desirable that some of the lines, which we at present contemplate being made through the direct agency of the State, should eventually be made by "construction and working companies," or even by unaided private enterprise. Further, the direction of some of the lines may have to be changed. What we mean is that no general change of principle should be made, and that, subject to the above qualifications, we should adhere to the details of the present programme. Especially, we think, that we should adhere to the money limit of expenditure during the period of five years with which this forecast deals.

71. We have one further observation to make. We mentioned at the commencement of this Despatch (para. 6), that we did not think it was necessary to go into the past history of the question. It is necessary, however, that we should allude briefly to the remarks contained in para. 13 of Lord Hartington's Despatch, No. 365 (Financial) of 8th December 1881. Those remarks are as follows:—

"Neither can it be overlooked that, at the expiration of such a period of guarantee, there would be a powerful moral obligation on the Government, if the undertaking should prove to be unremunerative, to come to the assistance of a body of shareholders whom it had induced to enter on a philanthropic undertaking for the benefit of the people of India, knowing at the time that the line was not one which could be constructed on commercial principles. The assumption of a liability of this character, certain for a considerable period and subsequently undefined, appears to me to differ not very greatly from the direct increase of indebtedness which it has been the object of recent instructions to avoid."

72. We think it would be dangerous to leave on record a declaration of this description from the Secretary of State, without our stating that we cannot agree to it. In the first place, we ought most carefully to avoid "inducing" anybody to undertake the only three lines which under our proposal will be made under the modified guarantee system. In all the communications we have had with various promoters of railways, we have most carefully explained to them that we are quite willing to give every information in our power, but that it must be fully understood that we would take no responsibility whatever as regards the correctness of the estimates, and that, before deciding to make an offer, private capitalists must test the correctness of the information themselves. We think, therefore, it should be very distinctly understood that we do not in any case recognise any moral obligation to go beyond the strict terms of our contracts.

73. In conclusion, we beg most earnestly to commend these proposals to your Lordship. They are the result of long and careful deliberation. We trust that they will meet with your Lordship's approval, and thus both terminate the uncertainty which at present exists in connection with our railway policy, and at the same time allow the speedy construction of those protective lines, the importance of which it is difficult to over-rate. We would solicit as early orders as may be compatible with the due consideration of a matter of such importance.

74 We enclose a Minute recorded by our honourable colleague, Mr. Hope, in which a proposal is put forward to place the Imperial Public Works administration, in respect to the whole of its transactions, upon a contract basis analogous to that of the quinquennial agreements with provincial governments. We are unable to support the proposal of our honourable colleague His Excellency the Commander in Chief is of opinion that in practice a contract would produce many of the advantages claimed for it by Mr Hope, while our honourable colleague, Mr Gibbs, wishes it to be noted that his experience of two years as Public Works Member, leads him to the conclusion that, if the contract system could be introduced, it would tend to encourage economy in the administration of the Department, and the construction of the works. We also append a map to illustrate our proposals.

We have, &c.
 (signed) *Ripon*
D. M. Stewart
J. Gibbs
E. Barrington
T. F. Wilson.
C. P. Ilbert.
S. C. Bayley
T. C. H...

APPENDIX

SCHEDULE (A.)

RAILWAYS indispensable for Protective or other Urgent Purposes, to be completed or made by the State or other Agency on its behalf

DESIGNATION OF RAILWAY	Gauge.	Length in Miles	Total Cost in Conventional Sterling	Class of Project.	REMARKS
(a) Capital to be Raised and Interest Paid by Government of India.					
Wazirabad-Sialkot - - - - -	Broad - -	25½	£ 100,000	Productive -	This is a useful feeder to the Punjab Northern State Railway which can be made for a cash outlay of 60,000 l only, together with the utilisation of surplus stores. In progress, and nearly completed to Hissar. Recommended by the Famine Commission, page 172. 89 miles are to be opened this year, and the total outlay up to 31st March will be 405,000 l. This line is being made out of revenue, and is at present charged to the famine grant, so that no borrowing or interest charge arise, but it is shown here because the total famine grant will afterwards be deducted from the total estimates.
Rewari-Hissar-Firozpur, with Branch to Fazilka -	Metre - -	293	1,267,000	Protective -	
Jhansi-Bargarh - - - - -	Ditto - -	203	1,300,000	- ditto -	Urgently required, and recommended by the Famine Commission as a protective work. The adoption of the broad gauge between Bhopal and Gwalior through Jhansi will probably necessitate the same gauge for this line. The Secretary of State has been asked for sanction to commence the line at once.
Vizagapatam-Raipur - - - - -	Broad - - or Metre - -	372	2,900,000 2,280,000	- ditto -	The necessity of protection against famine for this part of India has been strongly urged by the Famine Commission, and also by the Secretary of State in Despatch No. 3, of 12th January 1881. The gauge should be the same as that adopted for the Nagpur-Burrakur Railway, so that coal and grain may pass freely over it. Eventually, the line may be productive, and it may perhaps be taken over by the company making that railway, but its commencement should not be deferred on that anticipation.
Adoni-Kurnool-Guntūr - - - - -	Metre - -	280	1,600,000	- ditto -	This is a protective work of primary importance for supplying the Bellary and Kurnool districts with food in time of famine. It is strongly recommended by the Famine Commission. The metre gauge is suggested in order to admit of connection with the Southern Mahratta Railway at Hospet or Bellary if desired. The exact point of junction, whether Adoni or elsewhere, will be a subject for further consideration.
Cuddapah-Nellore - - - - - or Wontemetta-Nellore - - - - -	Broad - - Ditto - -	94 or 80	760,000 600,000	- ditto -	This likewise is an important work for the protection of Cuddapah and the districts above in time of famine. The shorter alternative, or a modification of it, will probably be adopted.
Prome-Allamyo - - - - -	Metre - -	42	875,000	- ditto -	A very necessary extension of the Irrawaddy Valley Railway.
TOTAL MILEAGE AND COST*		1,295½	8,132,000		
Deduct,—					
Mileage to be opened and Amount spent in 1882-83 -		89	405,000		
Remainder for subsequent Years - - - - -		1,206½	7,727,000		

* Adopting broad gauge estimate for line to Vizagapatam, and the shorter alternative to Nellore

RAILWAYS indispensable for Protective or other Urgent Purposes, to be completed or made by the State in default of other Agency.

DESIGNATION OF RAILWAY	Gauge	Length in Miles	Cost in Conventional Sterling	Class of Project.	REMARKS
<i>(b) Capital to be Raised by Government of India, Interest Paid by Provincial Governments.</i>					
Amritsar Pathankot	Broad	65	£ 480,000	Military and Productive.	Leads towards the military station of Dalhousie. Already begun, and total outlay to the end of the current year will be 203,000 l.
Bareilly-Pilibhit	Ditto	33	175,000	Protective and Productive	The first portion has been commenced in connection with the Kumaon Railway, which is being made by a subsidised company. Outlay in 1882-83, 25,000 l.
Dacca-Maimansinh	Ditto	85	600,000	Productive	Begun provincially, with view of transfer to a company, together with the Daood-khandi-Chittagong line. The outlay in the current year will be 44,000 l.
Tirhoot Railway Extensions Darbhanga-Pipraghat	Metre	24½	130,000	Protective and Productive	These extensions are under construction, and 101 miles, costing about 664,000 l up to the end of this year, will be opened during the current year
Muzafferpur Bettiah	Ditto	70½	470,000	- ditto	
Muzafferpur-Hajipur	Ditto	84	220,000	- ditto	
Hajipur-Sonpur	Ditto	4	120,000	- ditto	The Bengal Government has strongly recommended these extensions, and will undertake them on provincial responsibility. The entire Tirhoot system, consisting of 207 miles, costing 1,644,000 l, might, perhaps, be ere long sold to a private company.
Pipraghat Balua Furneah-Saifgunj	Ditto	120	1,570,000	- ditto	This is the connection of Behar and the North West with Assam, which is of primary importance to relieve the former of population and supply the latter with it, and which will have a very protective effect. It will also in part serve a very rich district, and prove fairly remunerative. The Bengal Government is willing to undertake these on provincial responsibility.
Monihari-Saifgunj-Dinajpore	Ditto	81			
Rangoon Toun-ngu (Sittang Valley)	Ditto	163	1,170,000	Military and Productive	Under construction, likely to be very profitable, outlay 586,000 l. up to the end of the current year
TOTAL MILEAGE AND COST		686	4,915,000		
<i>Deduct,—</i>					
Mileage to be opened and Amount spent in 1882-83		101	1,422,000		
Remainder for subsequent Years		585	3,493,000		

RAILWAYS indispensable for Protective or other Urgent Purposes, to be completed or made by the State in default of other Agency—continued.

DESIGNATION OF RAILWAY.	Gauge	Length in Miles.	Cost in Conventional Sterling	Class of Project.	REMARKS.
(c) Capital to be Raised by "Construction and Working" Companies, Interest to be Paid by Government of India					
Saharanpur Boroos-Moradabad, with branch to Hardwar.	Broad - -	134	£ 1,500,000	Protective and Productive.	Under construction by the Oude and Rohilkund Company on behalf of Government pending agreement as to a contract for construction and working 500,000 l have already been raised by debentures, but the interest charge has not yet been provided.
Bankapur-Harihar - - - - -	Metre - -	50	300,000	- ditto -	This line, which is to meet at Harihar, or some other suitable point, the Mysore Railway now in progress from Bangalore as far as Tumkur, is one of the extensions provided in the contract with the Southern Mahratta Railway Company as to be made by them on requisition Its protective value to the British District of Dharwar will be considerable, but to the Mysore State simply in calculable, as opening western access for grain from the sea in time of famine. Had this line existed in 1877-78, the mortality which occurred in Mysore would have been impossible As it will convey cotton and other exports, besides imports of all kinds, it promises to be fairly remunerative Its importance is pointed out by the Famine Commission
Poona Belgaum (Western Deccan) - - - - -	Ditto - -	253½	1,949,000	- ditto -	This line is essential for famine protection, and passes through tracts where much distress, great loss of cattle, and some mortality occurred in 1877-78 It is likely also to give fair returns from the outset, and eventually to pay well Some Native States which it will serve are disposed to aid in the guarantee Proposals for its immediate commencement are before the Secretary of State
TOTAL - - - - -	- -	437½	3,749,000		
(d) Capital payable from Provincial Balances, no Interest Charge.					
Farrakhabad-Hathras - - - - -	Metre - -	103	400,000	- ditto -	These are indispensable links to join the existing pieces of Provincial Railway, the Achnera Muttra-Hathras and the Cawnpore-Farrukhabad, and both are under construction as State railways But the entire line from Achnera to Cawnpore (24½ miles, costing 1,060,000 l) might well be made over to a local company, embracing the present shareholders of the Muttra-Hathras and Farrukhabad-Cawnpore Sections 198,000 l. will probably be spent up to the end of this year
Bridge over Jumna at Muttra - - - - -	Ditto - -	1	90,000	- ditto -	
Dinajpur-Perhatipur - - - - -	Ditto - -	20	120,000	Productive -	Under construction, and will be opened during 1882-83 The outlay will be about 80,000 l. up to the end of this year
Diamond Harbour Extension of Calcutta and South Eastern Railway	Broad - -	28½	215,000	- ditto -	Under construction as a continuation of the existing State Railway, and will be opened during the current year, with an outlay of about 194,000 l The disposal of the whole will be for consideration in 1883, when the Eastern Bengal Railway purchase question will come up
TOTAL MILEAGE AND COST - - - - -	- -	162½	825,000		
Deduct,—					
Mileage to be opened and Amount spent in 1882-83 -	- -	28½	472,000		
Remainder for subsequent years - - - - -	- -	124	353,000		

(c) Capital to be Raised by Private Companies, under "Limited Guarantee" System

Ranaghat-Santipur-Bhagwangola - - - -	Broad - -	92	810,000	Productive -
Bhopal-Jhansi-Gwalior and Jhansi-Cawnpore - -	Ditto - -	385	3,500,000	Protective and Productive
Barrakur Nagpore - - - - -	Ditto - -	627	4,500,000	- ditto -
Lalitpur Saugor-Damoh Katni - - - -	Ditto - -	190	1,520,000	- ditto -
Katni Omeria-Bilaspur - - - - -	Ditto - -	190	1,900,000	- ditto -
TOTAL MILEAGE AND COST - - -		1,484	12,230,000	
GRAND TOTAL MILEAGE AND COST - -		4,055½	29,851,000	
<i>Deduct,—</i>				
Mileage to be opened and Amount spent up to 1882-83 - - -		218½	2,209,000	
Remainder for subsequent years - - - -		3,837	27,552,000	

This is an extension of the Bengal Central Railway, about which they are in treaty with Government. A junction between Santipur and Memari on the East Indian Railway has been projected, but is not likely to be carried out immediately, as a second bridge over the Hooghly is not at present indispensable. Just about to be taken up by a company formed under the auspices of the Great Indian Peninsula Railway Company, exact terms at present unknown. This project is one of first class importance and urgency on account of its protective value, and, moreover, its evident productiveness has induced two distinct firms to make offers to construct it, which are now before the Secretary of State. It is proposed to purchase from Government the metre gauge line which is open and under construction from Nagpore to Nandgaon (145 miles), and to relay it on the broad gauge, so as to create uniformity of gauge between Bombay and Calcutta, and make the Hengur coal fully available to Western and Southern India. The recovery through this purchase is roughly estimated at 500,000. On the other hand, the net receipts on the open line so made over will be a set-off against the limited guarantee of Government on the capital sum raised for the purchase. Similarly required and recommended. But it should be soon remunerative, owing to its being the channel for the supply of Rewa coal to all lines northward, and of the Chatsgarh grain to any part of Northern India in time of famine. This line will open up the Rewa coal fields, and also the great grain-producing districts of the Central Provinces for the supply of Bundelkhand or other districts northward in time of famine. The junction with the Nagpore-Barrakur line may be somewhat south of Bilaspur.

A B S T R A C T

Capital to be borrowed by Government of India (a) and (b), less recovery under (c) - -	£	10,720,000
" " by Companies on behalf of Government of India (c) - - -	- - -	3,749,000
		<u>14,469,000</u>
" " on their own account (e) - - - - -	- - -	12,230,000
" to be provided from Provincial balances (d) - - - - -	- - -	353,000
		<u>27,052,000</u>
Interest at 4 per cent., maximum charge per annum—		
On loans raised by Government itself, permanent - - - - -	- - -	428,800
" " by Companies for Government, permanent - - - - -	- - -	149,960
" " by Companies on their own account, for limited periods - - - - -	- - -	489,200
		<u>1,067,960</u>
	£	

MEMORANDUM

	£.
Amount to be borrowed by Government of India as shown in Abstract - -	10,730,000
Additional for surplus and working stores - - - - -	580,000
Additional outlay required on open State Railways - - - - -	1,500,000
TOTAL - - -	12,750,000
<i>Less,—</i>	£.
To be provided out of revenue, under 31, Famine Relief - - - - -	1,500,000
Further Contributions from Provincial Balances - - - - -	500,000
	2,000,000
Net Amount to be borrowed for State Railways by the Government of India in 5 years - - - - -	10,750,000
<i>Add,—</i>	
To be borrowed by Government of India for East Indian Railway - - -	1,500,000
To be borrowed by "Construction and Working" Companies under (c) - - -	3,740,000
To be borrowed by "Guaranteed Companies" for open lines - - - - -	1,500,000
TOTAL to be borrowed by or on behalf of Government of India - - -	17,490,000
<i>Add,—</i>	
To be borrowed by Companies on their own account under (e) - - - - -	12,230,000
To be provided from Provincial Balances for lines under construction - - -	353,000
GRAND TOTAL to be Raised - - - £	30,082,000

SCHEDULE (B.)

RAILWAYS to be left to Private Enterprise.

0 61.

PROVINCE AND DESIGNATION OF RAILWAY	Gauge	Length in Miles.	Estimated Cost in Conventional Sterling	Class of Project	REMARKS
<i>Punjab</i>					
Rawal Pindi to Murree - - - - -	2' 6"	46	170,000	Productive -	Proposals from a company are before the Punjab Government
Loedhiana-Ferozpur - - - - -	Broad - -	80½	435,000	Military and Productive	Very valuable as communicating with the arsenal, and as promoting the export of wheat
Fazilka-Okara - - - - -	Ditto - -	40	200,000	Productive -	A valuable feeder to the Sind, Punjab and Delhi Railway from opposite Fazilka.
Khanpur-Mithankot - - - - -	Ditto - -	21	126,000	ditto - -	A valuable feeder to the Indus Valley State Railway from opposite Khanpur
Bhera-Daryakhan - - - - -	Metre - -	130	450,000	Military and Productive	An extension of the Salt Branch of the Punjab Northern State Railway to the Indus, opposite Dera Ismail Khan.
Umballa-Kalka - - - - -	Broad - -	40	300,000	ditto - -	It is a question not yet settled whether this is sufficiently needed to justify State action.
Jullundur Hoshiarpur - - - - -	Ditto - -	26	156,000	ditto - -	A useful feeder
<i>North West and Oudh.</i>					
Moradabad-Ramnagar - - - - -	Ditto - -	49	400,000	ditto - -	Leads to foot of hills below Rankhet
Hurdwar-Dehra-Rajpur - - - - -	Metre - -	40	220,000	ditto - -	This is one of several schemes for reaching the foot of the hills below Mussoorie and Landour
Puranpur-Kheri-Sitapur-Lucknow - - - - -	Ditto - -	173	650,000	Protective and Productive	Country very populous, well cultivated and favourable to railway construction. This line should eventually be connected somewhere with the Patna-Bahraich system
Lucknow-Bai Bareilly-Pertabgarh-Jaunpur - - - - -	Ditto - -	148	500,000	ditto - -	Populous, well cultivated, and favourable to railway construction
<i>Central India and Central Provinces.</i>					
Nowgong-Nagode-Sutna - - - - -	Ditto - -	113	900,000	ditto - -	This line would give a further outlet to Rewa coal, and convey it near to iron mines, but would run entirely through Native territory.
Jubbulpore-Gonda - - - - -	Ditto - -	185	1,070,000	Productive -	This would be a convenient link with Southern India in the event of a railway from Warora to Hyderabad being made, but the Katni-Omeria-Bilaspur line (see Schedule A) would serve nearly the same purpose
Bhopal Ujjain - - - - -	Ditto - -	110'	880,000	ditto - -	There is a considerable traffic between Central India and Gujerat, which would be served by this line, in the event of a continuation from Ruttam to Godra.

SELECT COMMITTEE ON EAST INDIAN RAILWAYS.

SCHEDULE (B)—Railways to be left to Private Enterprise—continued

PROVINCE AND DESIGNATION OF RAILWAY	Gauge.	Length in Miles.	Estimated Cost in Conventional Sterling	Class of Project.	REMARKS
<i>Central India and Central Provinces—continued.</i>					
Rutlam-Godra - - - - -	Broad or Metre	110	£ 1,400,000	} Productive	This would probably pay very well. The gauge would depend on whether it was constructed by the Bombay, Baroda, and Central India Company, who promoted it, or as a part of the metre gauge system of Rajputana.
Warora-Chanda - - - - -	Ditto - -	35	1,000,000 350,000		
<i>Bengal and Assam</i>					
Benares-Palamow-Lohardugga-Cuttack-Pooree -	Metre - -	530	4,600,000	Protective and Productive	This line, though expensive in parts, would probably be very productive, as it would open up the vast coal and other mineral resources of Chota Nagpore, and convey pilgrims from all parts of India to Pooree. It would also place Orissa in direct communication with the grain districts of the Central Provinces, and secure it effectually from famine. It would cross the projected Nagpore-Barrakur Railway at Langarh or Chakardarpur. The estimates are only approximate, pending survey this winter. The Palamow-Barun project, which is understood to have just been ceded by the Secretary of State to Messrs Burn and Company, might advantageously merge in this one.
Gaya-Toree - - - - -	Ditto - -	120	1,500,000	Productive -	This will open up the Karanpura coal field, and will fall into the Benares-Pooree line, so as to carry on to Pooree large bodies of pilgrims who have first visited the Gya temples.
Bhagalpur-Bowsee - - - - -	Ditto - -	30	140,000	ditto - -	Messrs Burn and Company are trying to get up a company to carry out this project.
Bidyabatti-Tarakeswar - - - - -	Broad - -	22	160,000	ditto - -	Some native gentlemen are promoting this project, which is to serve a great place of pilgrimages. Bidyabatti is a station on the East Indian Railway.
Kissegunj Kotchandpur - - - - -	2'	19	40,000	ditto - -	Messrs Burn and Company are starting this project for communicating with an important mart in Jessore.
Daodkhandi-Comilla Chittagong - - - - -	Metre - -	125	920,000	ditto - -	This line is about to be taken up by a company under the same auspices as the Bengal Central Railway.
Comilla Cachar - - - - -	Ditto - -	180	1,500,000	ditto - -	A preferential right to this extension will be reserved to the company above referred to.
<i>Assam</i>					
Cachar-Golaghat-Dibrugarh - - - - -	Ditto - -	250	2,350,000	} ditto - -	The feasibility of this project depends on surveys of the North Cachar hills to be made this cold season, it would open up communication with all the tea industries in Sylhet, Kachar, and Upper Assam, besides serving important military and immigration purposes, and with the aid of the coal from Makum it would probably prove a paying investment soon after opening.
Branch from the above to Nowgong - - - - -	Ditto - -	50	350,000		

		£			
0.61.	<i>Madras</i>				
	Mayaveram-Tranquebar - - - - -	Ditto - -	15	66,000	Productive - A local extension, to be done by private enterprise
	Palghat-Dindigul - - - - -	Ditto - -	100	300,000	ditto - - A local extension, to be done by private enterprise, if at all
	Madura-Paumben - - - - -	Ditto - -	94	300,000	Protective and Productive Not a very promising or urgently needed project, but it would bring another harbour into railway communication, and help imports in time of famine.
	Tinnevely-Trevandrum-Quilon, by Aramboly Pass -	Ditto - -	132	700,000	Productive - Only 36 miles of this line are in British territory, so it should be constructed by private enterprise or by the Travancore State.
	Nilgiri Railway-Metapoliun-Conoor - - - - -	Ditto - -	12	132,000	ditto - - A local project, about to be undertaken by a company
	Shoranoor-Cochin - - - - -	Broad - -	59	660,000	ditto - - Almost entirely in Native States, principally Cochin. Efforts are being made to float a company under limited guarantees from Cochin and Travancore.
	Beylore Calicut - - - - -	Ditto - -	7	110,000	ditto - - A local extension, but beneficial to the Madras Railway
Beylore Gudalur-Mysore - - - - -	Metre - -	138	900,000	Productive and Protective This is one of several proposed routes for opening the Wynsad to the coast, and protecting Mysore from famine, 77 miles would be in British territory and 61 in Mysore, up to the junction with the Mysore Railway. The construction of 35 miles of the Mysore portion up to Gandulpetta is already under the consideration of the Mysore Government	
1.2	<i>Bombay.</i>				
	Karwar-Hubli - - - - -	Ditto - -	109	794,000	Productive - The construction of the Mormugao-Hubli Railway has removed all urgency from this line, which must now be left to private enterprise, and to such time as the trade of this part of India is found to require two railway communications with the sea.
	Barisi Station-Pandharpur-Miraj - - - - -	Ditto - -	107	450,000	Productive and Protective. This line would connect the Great Indian Peninsula and West Deccan Railways. The portion (83 miles) as far as Pandharpur, a great place of pilgrimage, would be very productive, the rest moderately so. The whole would be valuable in time of famine, but the urgency is not so great as to necessitate commencement by Government.
	Barisi Station to Barisi - - - - -	Broad - -	20½	120,000	Productive - Leads to a town of commercial importance, and would be a useful feeder to the Great Indian Peninsula Railway
	Surat-Bardoli-Songudh-Nandurbar - - - - -	Ditto - -	91	455,000	ditto - - The first 28 miles go through a fertile country, and would be fairly productive, but a great part of the territory traversed belongs to the Guicowar, who should give material assistance. The necessity and remunerativeness of the extension up to Nandurbar in Khandesh are doubtful
TOTAL MILEAGE AND COSTS - - - - -		- -	3,497	24,344,000	

* Adopting metre gauge for the Rutlam-Godra line

Note—From this Schedule the following projects have been omitted -

- (1) Broach Jambusar and Palhunpore-Deesa, as unnecessary
- (2) Anand-Piplo, Mehsana to Kheralu, Pattan and Wadhwan-Dhoraj-Verawal, as being in and chiefly for the use of Native States
- (3) Connections between Gujerat and Sind, as being unremunerative, and not needed for political or military purposes

The Ferozepur-Raswind branch, just commenced by the Sind, Punjab, and Delhi Railway Company, as also the Bareilly-Rambagh, Patna-Bahratch, Palamow-Barun, and Burdwan-Kutwah projects, which have lately been conceded to private companies, are also excluded.

APPENDIX II.

ESTIMATED Results from constructing all Railways included in Schedule (A), omitting certain Lines under Sub-head (e), *vide* paragraph 46 of Despatch, No 29, dated 23rd January 1883.

	Length.	Estimated Cost.	Probable Outlay to Complete	ESTIMATED NET REVENUE (IN THOUSANDS OF RUPEES)				
				1883-84.	1884-85	1885-86	1886-87	1887-88
RAILWAYS UNDER CONSTRUCTION								
IMPERIAL		<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>
Rewari-Ferozepore - - - - -	293	1,25,70,000	85,20,000	1,00	1,25	1,75	2,30	3,40
PROVINCIAL								
Tirhut Extensions - - - - -	101	50,00,000	3,60,000	1,25	2,00	2,50	3,00	3,25
Dacca-Maimansingh - - - - -	85	60,00,000	55,60,000	-	50	75	1,25	2,00
Amritsar Pathankot - - - - -	65	46,00,000	25,70,000	45	50	1,00	1,25	1,50
Rangoon and Saittoang Valley - - - - -	163	1,17,00,000	58,40,000	50	1,00	1,50	2,50	3,50
Furrakhabad-Hatras - - - - -	104	49,00,000	29,20,000	10	50	1,00	2,00	2,50
Jumna Bridge - - - - -								
Dinapore-Parbatipur - - - - -	20	12,00,000	4,00,000	10	20	30	40	50
Diamond Harbour Extension - - - - -	28½	21,50,000	2,10,000	20	30	40	60	80
Bareilly-Pilibhit - - - - -	33	17,50,000	15,00,000	-	10	25	35	50
Total PROVINCIAL - - - - -	899½	3,53,00,000	1,93,60,000	2,40	5,10	7,70	11,35	14,55
Total IMPERIAL and PROVINCIAL - - - - -	892½	5,08,70,000	2,78,80,000	3,40	6,35	9,45	13,65	17,95

IMPERIAL		RAILWAYS PROJECTED							
Wazirabad Sealkote	25½	10,00,000	10,00,000	-	10	25	35	50	
Jhansi-Barghur	203	1,30,00,000	1,30,00,000	-	-	25	75	1,00	
Vizagapatam-Raupur	372	2,90,00,000	2,90,00,000	-	-	1,00	1,25	1,50	
Adoni-Guntoor	280	1,60,00,000	1,60,00,000	-	-	25	75	1,00	
Cuddapah-Nellore	80	60,00,000	60,00,000	-	-	-	25	50	
Prome-Allanmyo	42	87,50,000	87,50,000	-	-	-	50	80	
Total IMPERIAL	1,002½	6,87,50,000	6,87,50,000	-	10	1,75	3,85	5,80	
PROVINCIAL									
Mosaffurpur-Hajipur	}	38	34,00,000	34,00,000	-	25	50	75	1,00
Hajipur Sonpur									
Pipraghat-Balius	}	201	1,57,00,000	1,57,00,000	-	-	25	1,25	2,25
Purneah-Saifgunj-Dinapur									
Total PROVINCIAL	239	1,91,00,000	1,91,00,000	-	25	75	2,00	3,25	
Total IMPERIAL and PROVINCIAL	1,241½	8,78,50,000	8,78,50,000	-	35	2,50	5,85	9,05	
Total under CONSTRUCTION and PROJECTED	2,134	18,87,20,000	11,87,80,000	3,40	6,70	11,05	19,50	27,00	
Extension of Bengal Central Railway	92	81,00,000	81,00,000	-	25	-	-	-	
Extension of Southern Mahratta Railway	303½	2,24,90,000	2,24,90,000	-	-	1,00	1,50	2,00	
Extension of Oude and Rohilkand Railway	134	1,50,00,000	1,50,00,000	-	1,00	2,00	3,00	4,00	
GRAND TOTAL	2,669½	18,43,10,000	16,13,20,000	3,40	7,95	14,95	24,00	39,00	

APPENDIX III

RAILWAYS Open, under Construction, and Projected, with which the State has Current Accounts.

N.B.—Subsidised Railways receiving no aid, except a grant of land, are not shown here.

RAILWAYS.	Length	Estimated Capital Outlay to end of 1882-83.	Estimated Net Revenue during 1882-83.	Percentage of Revenue to Outlay.	Probable Additional Capital Outlay up to end of 1887-88.	ESTIMATED NET REVENUE (IN THOUSANDS OF RUPEES)				
						1883-84	1884-85	1885-86	1886-87.	1887-88.
GUARANTEED										
	<i>Miles</i>	<i>Rs</i>	<i>Rs</i>		<i>Rs.</i>	<i>Rs</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>
Eastern Bengal - - - - -	158 75	3,55,39,636	25,75,000	7 25	1,50,00,000	26,00	26,50	27,00	27,25	27,50
Madras - - - - -	858	11,58,49,489	18,00,000	1 55		18,25	18,50	18,75	19,00	19,25
South Indann - - - - -	653 25	4,53,05,171	14,00,000	3 08		14,10	14,20	14,30	14,40	14,50
Bombay, Baroda, and Central India - - - - -	421 5	8,84,44,568	64,00,000	7 23		65,00	66,00	67,00	68,00	69,00
Great Indian Peninsula - - - - -	1,288	25,79,00,704	1,65,00,000	6 40		1,67,00	1,69,00	1,71,00	1,73,00	1,75,00
Oude and Rohilkund - - - - -	686 5	6,98,69,757	21,50,000	3 08		21,75	22,00	22,25	22,50	22,75
Sind, Punjab, and Delhi - - - - -	663 5	12,05,56,351	39,00,000	3 23		39,25	39,50	40,00	42,00*	45,00°
TOTAL - - -	4,729 5	73,36,49,671	3,47,25,000	4 73	1,50,00,000	3,51,35	3,55,70	3,60,20	3,66,15	3,73,00
STATE.										
East Indian - - - - -	1,504 25	38,71,29,454	2,60,00,000	6 87	1,50,00,000	2,80,00	2,85,00	2,90,00	2,95,00	3,00,00
Rajputana-Malwa - - - - -	1,115 75	9,49,83,896	50,00,000	5 26	1,50,00,000	55,00	60,00	65,00	70,00	75,00
Sindhia - - - - -	74 75	8,80,617	1,20,000	1 35		1,30	1,40	1,50	1,60	1,70
Wardha Coal - - - - -	46 5	60,87,742	1,25,000	2 05		1,40	1,45	1,50	1,55	1,60

061.

N

Nagpore-Chhatargarh - - - - -	128 7½	98,10,023	1,50,000	1 53		2,50	2,75	3,00	3,25	3,50
Punjab Northern - - - - -	425 25	7,17,20,746	8,60,000	1 18		8,50	8,60	8,70	8,80	8,90
Indus Valley and Kandahar - - - - -	654 25	8,30,90,830	15,00,000	1 81	-	16,00	16,25	16,50	17,00	17,60
Dhond and Manmad - - - - -	145 75	1,00,95,399	1,50,000	1 48		1,60	1,70	1,80	1,90	2,00
Bangoon and Irawadi - - - - -	161	1,32,04,806	7,00,000	5 26		7,50	7,75	8,00	8,25	8,50
Northern Bengal - - - - -	266 5	2,10,82,285	9,50,000	4 50	1,60,00,000	9,75	10,00	10,25	10,50	10,75
Tirhut - - - - -	85	61,78,801	3,25,000	5 26		3,50	3,60	3,70	3,80	3,90
Patna and Gaya - - - - -	57	40,40,430	2,00,000	4 95		2,10	2,20	2,30	2,40	2,50
Calcutta and South Eastern * - - - - -	28	67,63,022	60,000	88		60	61	62	63	64
Nalladi - - - - -	27-25	3,32,092	4,000	1 20		10	10	10	10	10
Cawnpore-Farrakhabad - - - - -	86	32,48,888	1,50,000	4 62		1,55	1,60	1,65	1,70	1,70
Ghazipur-Dildarnagar - - - - -	12	7,79,873	6,000	77		7	8	9	10	11
Muttra-Hathras - - - - -	20	10,85,458	30,000	2 76		30	30	35	40	45
Muttra-Achnera - - - - -	24	6,42,369	33,000	5-14		35	35	45	50	55
TOTAL - - -	4,671	72,92,55,761	3,69,53,000	5 07	8,00,00,000	3,92,12	4,03,74	4,15,51	4,27,48	4,39,40

East Indian - - - - -	2,80,00	2,85,00	2,90,00	2,95,00	3,00,00
Other Imperial Lines - - - - -	83,80	89,40	95,00	1,00,85	1,06,70
Provincial - - - - -	28,32	29,34	30,51	31,63	32,70
TOTAL - - - Rs	3,92,12	4,03,74	4,15,51	4,27,48	4,39,40

* If the line comes under State management If it is given to a Company, we cannot expect so good a result.

MINUTE by the Honourable T. C. Hope, 20 January 1883.

I REGRET to be obliged to dissent from this Despatch, in so far as it rejects the portion of the proposals laid by me before the Council, which related to the placing of Imperial Public Works administration, in respect of the whole of its transactions, upon a contract basis analogous to that of the quinquennial agreements with provincial governments.

2. The Despatch is entirely in accord with my proposals for a new policy in respect of railway extension, but certain changes in the existing system of finance and administration seemed to me to be necessary in order, more speedily, economically and effectually, to carry out that policy, as well as to remove other difficulties with which the department has to contend. These changes I now proceed to describe.

Existing System.

3 A necessary preliminary will be to review the existing situation, and to make as close a forecast for the future as may be practicable at the present period of the year. For this purpose I append two accounts, which have been prepared by the Accountant General (Colonel Filgate). No I. shows the Imperial Public Works receipts and expenditure for the five years 1878-79 to 1882-83, inclusive, No II. is a forecast for five years to come, railway extension being estimated on the new basis. Provincial transactions by local governments under their contracts are excluded. Both accounts are in the form adopted for the budget, and comprise two portions,—the “ordinary,” being expenditure out of the general revenue, with certain inconsiderable receipts which are a set-off to them, and the “productive,” relating to works which pay, or are estimated to pay within a fixed number of years from their opening, 4 per cent on the capital, derived from Loan Funds, which has been invested in them. The former portion shows, and always will show, a very heavy deficit, since it contains the fixed grant of a crore of rupees for Military Works, the Famine Relief grant of 75 lakhs for works undertaken on account of their “protective,” not their remunerative, value, the price of land given to subsidised railways, the canals, agricultural improvements, &c, which do not pay; the cost of railways constructed solely for war or other urgent purposes, and, finally, the outlay on civil buildings of all kinds, administrative, postal, telegraphic, &c. The latter portion, relating to Productive Public Works, is, by its hypothesis, remunerative, but it only reached the turning-point and became normally so in 1880-81. From that year a continuously increasing net profit has occurred, and may be expected, though varying very considerably in ratio from year to year.

4 The following is a summary of the two accounts, in thousands of pounds conventional sterling.—

First Period, 1878-79 to 1882-83

	REVENUE					EXPENDITURE				
	1878-79	1879-80	1880-81	1881-82	1882-83	1878-79	1879-80	1880-81	1881-82	1882-83
Ordinary - - -	84	81	81	90	94	2,106	3,608	4,118	3,158	3,348
Productive - - -	5,846	7,559	8,453	9,713	9,121	7,242	7,753	7,985	8,304	8,614
TOTAL - - -	5,930	7,640	8,534	9,803	9,215	9,408	11,361	12,103	11,460	11,962
Deficit - - -	3,478	3,721	3,589	1,648	2,747	-	-	-	-	-

Second Period, 1882-83 to 1887-88

	REVENUE					EXPENDITURE				
	1883-84	1884-85	1885-86	1886-87	1887-88	1883-84	1884-85	1885-86	1886-87	1887-88
Ordinary - - -	318	247	287	346	428	3,140	3,222	3,297	3,395	3,470
Productive - - -	9,420	9,643	9,944	10,252	10,618	8,734	8,902	9,111	9,303	9,561
TOTAL - - -	9,638	9,890	10,231	10,598	11,046	11,874	12,124	12,408	12,700	13,031
Deficit - - -	2,236	2,234	2,177	2,102	1,985	-	-	-	-	-

Capital

Capital expenditure from "Loan Funds" does not, of course, enter into these accounts; but it may be mentioned that the forecast is framed on what it is believed will, on the basis of the new proposals in the Despatch, be the imperial portion of an annual fixed grant of 2,450,000 *l.* for outlay on railways, and of 950,000 *l.* for outlay on irrigation works; 300,000 *l.* of the railway outlay and 250,000 *l.* of the irrigation outlay being charged to the famine protection grant.

5 The expenditure referred to above is regulated, as between the Public Works and Financial Departments, upon three different principles,—first, the Famine Relief Grant (No 31), the Military Works Grant (one million, comprised in No. 34), and the whole capital expenditure from Loan Funds are constant in amounts from year to year, and unexpended balances of one year do not lapse, but are available in the following years, just as all balances of provincial revenues are; secondly, the interest charges and working expenses are not fixed at all, but depend, the former on the capital actually booked in the year, and the latter on the discretion of the Public Works Department and the exigencies of traffic, &c. thirdly, the ordinary grants, for "32—Railways," "33—Irrigation and Navigation," and "34—Other Public Works" (except, nominally, the Military Works million) are made *de novo* from year to year, and sometimes supplemented in the course of the year, under constant pressure, struggling and bargaining. Unexpended portions of grants lapse absolutely, and the works to which they were allotted must be completed by withdrawing from other works the funds destined for the latter in the Budget of the succeeding year, unless supplementary grants can be obtained. Such grants, if obtained at all, mostly come to hand too late to have full effect, and thus a vicious circle is perpetuated.

The receipts, on the other hand, are in all cases simply brought to credit, whatever they may be, and the Financial Department makes good out of the general revenues whatever may chance to be the deficit on the whole account.

System Proposed.

6 The system just described appears to me faulty as between the two departments, in that it affords to the Public Works no interest in keeping down its expenditure and increasing its revenue, and to the Financial no security against inordinate demands or friction, and no certainty as to the amount of the deficit it may have to make good from year to year. On the two departments, individually, also, the effect is prejudicial. Public Works administration of the "first portion" described in paragraph 3 cannot be economical or effective under ever-fluctuating resources and lapsing grants. Establishments are at one time idle, at another overburdened, and the temptation to fling away money towards the end of the year rather than let it lapse, is notoriously not always resisted. There is no elasticity; money lapses under one head which could be utilised in another without disturbing the total eventual appropriations. Public Works administration of the "second portion," comprising the raising of above 15½ millions of railway receipts, and the regulation of some 8½ millions of railway working expenses,* is not likely to produce the best possible result as long as the department has no interest in that result. The Financial Department, on the other hand, is tempted to regard the increasing railway receipts as a direct means of relieving the general tax-payer, and might possibly be led to embark in measures of general policy on the faith of doubtful speculations as to their amount, a course hazardous at all times, considering the dependence of railway receipts on trade, peace and other fluctuating influences, and premature while the construction of railways under the new policy is incomplete.

7. Speaking of the Public Works Department as my especial province, I may say that I am convinced, that if the new railway policy is to be adopted, and if works of all kinds are to be constructed with economy and a rapidity commensurate with the protective, commercial, and administrative needs of India, the abandonment of this system is imperatively necessary. The practice of annual grants and confiscated lapses yields no appreciable profit to the Department of Finance, while it is the cause of very great administrative weakness and pecuniary loss in that of Public Works. Again, no stimulus to thrifty railway administration can be half so effective as an interest in the receipts, coupled with the knowledge that in them alone must dependence be placed for "making two ends meet," and for the means of executing obligatory works.

8 The advantages which I anticipated from such an arrangement were (1) removal of the evils of the system of lapses, which affects about a million and a-half of annual expenditure; (2) more thrifty administration of above twenty-three millions of gross railway receipts and expenditure; (3) the stimulus of a definite task, † to be achieved with defined means in (as nearly as possible) a definite time, in lieu of demoralising uncertainties; (4) additional security for fixity of policy, and a trial to private enterprise for a period sufficiently long to give a fair criterion of results.

I may

* These are the gross amounts. In the accounts appended some items are shown net, as stated in the explanation to Account No. 1.

† This would embrace a programme of irrigation expenditure, which question has not, for the present, been entered into.

I may now add that such a contract would both obviate the difficulties mentioned in the 43rd paragraph of the Despatch, and might render unnecessary the charge of interest of capital to the Famine-protection grant, as proposed in the 37th paragraph, because the Public Works Department could then find the funds required for famine relief without stopping specific works or debiting interest to one specified head. It would also mitigate, by a general average, the annual fluctuations which may otherwise be expected to cause difficulty or friction. Finally, by the coupling of outlay with a fixed source of ways and means, it would afford a security for due relation between the two most effective in itself, and very likely to give confidence to the public in Indian investments, and in the continuity of development of facilities for commerce.

9. It may here be pointed out that no novel principle is involved in the proposal that the Imperial public works administration should be placed upon a contract basis. Whatever arguments have been held to warrant arrangements on that basis in the case of provincial governments appear to apply with equal force in the present instance, perhaps with greater force, inasmuch as the Public Works Department is one homogeneous branch of administration, and a branch affording more scope than any other for stimulating income and restricting expenditure, since the fluctuating items alone, which may be worked upon, amount, as I have said, to some 23,000,000 l. annually. Those arguments are so well known that I need not recapitulate them, or give the long array of quotations from the highest authorities which it would be easy to collect. They have been justified by the experience of a dozen years, and recognised as sound by the recent grant of contracts to all provincial governments for a new quinquennial period.

10. With reference to the terms on which such a contract might be concluded, I may observe that, logically, and in accordance with the general practice in fixing provincial contracts, the net deficit estimated as to be made good from the general revenues in the current year*, or at any rate that for the year in which the new policy is to take effect, ought to be taken as the fixed grant for the coming five years, and the whole of the growing "productive" receipts should go towards the new obligatory expenditure. Stated in another form, the case stands thus.—The Financial Department have never, except in the famine year 1877-78, had any surplus railway receipts for the benefit of the general tax-payer until the last and current years. Now that such receipts have begun to accrue, it is proposed that the tax-payer shall for the present be content with an indirect benefit from them, instead of a direct one. The necessity for railway and canal extension, and for protection from famine by these means, is generally accepted. It is emphatically advocated by the Famine Commission, the Press, and the public. It is acknowledged in the expectations held out by the Secretary of State, in Despatches Nos. 1 and 365 of 6th January and 8th December 1881, that a larger sum than 2½ millions a year would ere long be available. The means for this extension are at last to hand, in the new item of railway profits. Let railways breed railways, and canals too, if there be funds to spare for them after providing adequately for the more generally needed agency of railways. Let the tax-payer, instead of taking direct possession of these profits, in order to lighten present burdens, or to gratify new wants, receive the advantage of them in the form of increased facilities for locomotion and trade, increased exports, lightened exchange, improvement in land revenue, and other well known results. And, above all, let him derive from them his more rapid insurance against a famine such as that of 1876-78, lasting for nearly two years, costing 10 or 12 millions sterling, nearly as much as the total which it is now proposed to borrow for extension of Schedule A., and sacrificing a million or more of human lives.

11. But, as I understand that financial exigencies are held to necessitate a surrender of railway profits to the general tax-payer, I propose, though with much regret and reluctance, that the fixed grant, or deficit to be made good, should be that estimated for the coming year, or first year of the series, with abatement after two years, if required, and that if, in any year, any profit above that be realised, two-thirds of it should be made over to the Financial Department. It would, of course, be understood, that the contract was a strict one, and that short receipts in any one year would give no claim against the Financial Department, but would be set off against possible excess profits in others. An arrangement, such as this would be to the Financial Department, as nearly identical as possible with the existing liability it incurs, but to the Public Works Department the difference, in greater stimulus and efficiency, would be very great. The contract amount would, of course, be subject to the condition that it would be rectified so as to get any essential change of circumstances occasioned by sale or acquisition of individual railways, since no estimate regarding the effect of such transactions can be made beforehand. Such sales are, however, deprecated in paragraph 47 of the Despatch, and not likely to occur, except under very exceptional circumstances. Guaranteed railways, too, if acquired when right to purchase

* To take a longer back average would give a more unfavourable result for the Financial Department, because the productive works did not pay their way till 1880-81.

† According to Account No II the amount might be 22¼ lakhs for the first two years, and 210 lakhs for the remaining three, but the actual figure cannot be stated until the Budget estimates have been completed in March next.

purchase accrues, are little likely to be retained as State railways. The famine grant, likewise, would technically be liable to partial or total withdrawal in the event of actual famine, though, practically, it would probably be replaced by relief works expenditure, again, the contract would not involve any surrender of the established control of the Secretary of State or the Financial Department in respect of the sanction of projects, the conduct of negotiations with companies, the strength and cost of fixed establishments, and the like. Other minor details need not now be entered into, my present object being merely to set forth the proposed change in principle.

Objections considered.

12 The first objection which occurs to me is that it may possibly be feared that to hand over a rising revenue for expenditure limited only by the amount of that revenue will promote a largely increased State outlay, but this could not occur under my proposal, because the State outlay on railways (which I here mention as being the principal item) will, under the new policy, be strictly limited by the proposed Schedule A. If the revenue should rise somewhat faster than the most strict estimate provides, then, Schedule A would be exhausted, and State railway expenditure would stop absolutely, so much the sooner. Were it not for Schedule A., some ground for the apprehension alluded to might exist, but with that Schedule there need be none. One main object of the new policy, as I understand it, is to limit capital expenditure on railways by the State, and eventually to stop it altogether. Schedule A. will so limit it in the most formal way; and the reform I advocate, by which the whole public works receipts and expenditure would be dealt with as one account, would ensure the stoppage of such capital expenditure at the earliest possible date. On the other hand, if it were thought preferable to adhere to the annual limit of expenditure on railways recommended in the Despatch, then the one-third of any excess profits might be applied to irrigation, thus promoting the earlier completion of the approved projects, which afford a definite programme for some years to come.

13 Again, it may be argued that a contract can have only one result. Either it will be favourable to the Public Works Department, in which case the Financial Department will have sacrificed funds which it can ill afford, or else it will be unfavourable to the Public Works Department, in which case we may be sure that strong pressure will be exerted to get the contract changed, and that the stability, which it is one object of the proposal to ensure, would not be attained.

As to the first alternative of this objection, it may be sufficient to say that, if the contract is properly framed, the estimate would be a close-cut one, out of which no great gain would probably accrue to either side, but that two-thirds of whatever gain there might be would accrue to the Financial Department, and that there is no reason to suppose that the finances are in such a state as not to permit of that department allowing even the remaining third to be spent on necessary railway or irrigational development. Moreover, this objection pre-supposes a profit which might never accrue under the absence of incentive involved in the existing system.

As to the second alternative, it rests on a misconception, for any so-called loss under the contract would merely have an effect on the Scheduled works inverse to that of gain. It would prolong for a short time their completion, but the Public Works Department would have no object in pressing for an alteration of the contract.

14 Further, it may be said that the Public Works Department requires no such incentive to the performance of its duty as an interest in the receipts. But I submit that the advantages, in the way of economy and efficiency, which an interest in receipts and expenditure ensures, cannot be ignored under cover of any compliment of this sort. In the case of the scheme of Provincial Decentralisation, those advantages, together with that of certainty, were put prominently forward in Lord Mayo's well-known Resolution of 14th December 1870, and in numerous official utterances at that time and subsequently, they were indisputably realised during the years of Provincial administration of certain items of receipt and charge which followed, and their value was formally and emphatically recognised last year by the grant of new quinquennial contracts, on a greatly enlarged basis, to all the Local Governments and Administrations.

15. Another mode of treating the proposal would be as a mere effort to get rid of control, such as those which executive spending departments not unfrequently make, in England and elsewhere. Such a view, however, is inconsistent with any full knowledge of its nature. It is not asked, as has been already said in paragraph 11, that any of the regular and established checks on expenditure may be relaxed and dispensed with. Nor is the Public Works Department merely a spending department, it is a revenue-receiving department, and a receiver of revenue not fixed, but fluctuating from day to day and vastly affected by details of administration. What is asked is for elasticity of action within a well defined ring-fence, for the more complete utilisation of means towards sanctioned ends. That elasticity has already been granted, with the best results, to the Provincial Governments.

16. It may, again, be supposed that all important practical difficulties in Public Works administration would be met by making fixed grants for five years for the heads of "Other Public Works" and "Irrigation and Navigation" which have in paragraph 5 been described as fluctuating so inconveniently. But the difficulties attending the lapse system would not be met by fixed grants under these heads, because each head is in itself too small to allow a margin for fluctuations. Moreover, why need the Imperial grants under these two heads and that of Railways, Ordinary, be kept under the yoke of this system when the Provincial grants under these very same heads are free from it? A rule that, though grants should be annual, the unexpended portion of a grant once made should be carried on to the next year, would however afford a certain relief.

It may also be now supposed that the proposals in the present Despatch, by which an annual sum for railways is fixed for five years, will be a sufficient solution of any difficulties which may exist. But these proposals do not in reality touch the question. There are fixed protective and productive grants at present.

14. Once more, it may be held that the very fact that the Government of India have granted contracts for their whole Public Works to the Provincial Governments, is a good reason for not following an analogous course in the case of its own Public Works. The Supreme Government, it may be said, has already, by its decentralisation policy, coupled with its remission of customs duties, reduced its power of meeting sudden demands, and cannot afford to proceed further in the same direction. To this it may be replied, that the Public Works Department does not possess any important means of meeting such demands. Large as is the sum which a contract would embrace, no portion of that sum is available for sudden reductions except that which I have described in paragraph 3 as "Ordinary." The total amount of this (exclusive of the famine and military allotments) is only a million and a half, of which the greater portion is locked up in establishments, petty current works, repairs, and the like, which cannot be profitably reduced to any appreciable extent. Even in former days, sudden economy in this branch has never yielded much in the end, but since the great reductions of late years, it would be still more infructuous. A real reserve does not exist in this quarter.

15. In conclusion, I trust that the position which I hold is a sufficient justification for my desire to secure the fullest consideration, and a record of my own views, in respect of a matter which many years of administrative experience assure me to be of vital importance to the effective working of the department in my charge, but which I have no reason to believe will prove more costly than the system now in force, or will involve any necessity for imposing additional taxation.

(signed) T. C. Hope.

ACCOUNTS, Nos. I. & II.

ACCOUNT, No. 1.

PUBLIC WORKS, RECEIPTS, and EXPENDITURE, 1878-79 to 1882-83.

REVENUE	Actuals, 1878-79.	Actuals, 1879-80	Actuals, 1880-81.	Actuals, 1881-82	Budget Estimate, 1882-83.
	<i>Rs</i>	<i>Rs</i>	<i>Rs.</i>	<i>Rs</i>	<i>Rs</i>
XXV Railways, subsidised - - -	- - -	- - -	- - -	- - -	10,000
XXVI Irrigation and Navigation	2,27,740	2,37,059	2,64,460	3,21,572	3,27,000
XXVII. Other Public Works - - -	6,14,290	5,75,600	5,42,050	6,70,552	6,02,000
Total - - -	8,42,030	8,12,668	8,06,510	9,92,124	9,30,000
REVENUE FROM PRODUCTIVE PUBLIC WORKS -					
I Land Revenue (Irrigation and Navigation) - - - -	5,97,530	58,55,050	73,22,350	59,37,315	59,81,000
XXV. Railways					
Guaranteed Railways - - -	4,86,12,440	4,62,25,846	2,91,33,130	3,61,62,615	3,47,25,000
East Indian Railway - - -	- - -	94,91,538	2,77,05,250	3,26,14,820	2,66,00,000
State Railways - - -	69,31,350	1,17,64,931	1,73,58,000	1,98,18,362	2,14,77,000
Total - - -	5,55,49,790	6,74,82,315	7,47,90,380	8,85,96,697	8,28,02,000
XXVI Irrigation and Navigation -					
Madras Canal Company - - -	22,44,000	26,00,544	22,92,620	26,99,187	25,78,000
Total - - -	77,760	1,57,998	- 76,500	*- 1,04,000	- 1,51,000
Total - - -	23,21,860	27,58,537	22,16,120	25,95,187	24,27,000
Total REVENUE FROM PRODUCTIVE PUBLIC WORKS - - - }	5,84,63,170	7,55,95,902	8,43,34,860	9,71,29,199	9,12,10,000
GRAND TOTAL - - -	5,93,05,200	7,64,08,570	8,51,41,860	9,81,21,823	9,21,49,000

* Regular Estimate.

EXPLANATION of the Items entered under the following heads in the preceding Statement.

XXV Railways - Guaranteed Railways - - - Net traffic receipts.
 East Indian Railway - - - Net traffic receipts.
 State Railways - - - Gross traffic receipts

ACCOUNT, No 1.

PUBLIC WORKS, RECEIPTS, and EXPENDITURE, 1878-79 to 1882-83.

EXPENDITURE.	Actuals, 1878-79.	Actuals, 1879-80.	Actuals, 1880-81	Actuals, 1881-82	Budget Estimate, 1882-83.
	Rs.	Rs.	Rs.	Rs.	Rs.
31—Famine Relief (Protective Works) - - - -	-	-	-	72,70,000	75,00,000
32—Railways					
Ordinary - - -	17,20,420	46,65,682	5,66,354	10,14,009	29,16,000
Subsidised - - -	-	-	-	1,32,261	5,04,000
Frontier - - -	-	1,33,43,406	2,29,36,150	25,86,886	22,30,000
33—Irrigation and Navigation -	50,68,800	48,34,899	44,32,240	46,61,618	52,28,600
34.—Other Public Works - -	1,48,75,812	1,82,32,485	1,82,44,451	1,59,00,979	1,51,08,000
Total - - -	2,16,65,032	3,60,76,681	4,11,79,195	3,15,66,848	3,34,86,000
EXPENDITURE ¹ ON PRODUCTIVE PUBLIC WORKS (Working Expenses and Interest).—					
I.—Interest on Debt:					
East Indian Railway - -	-	8,43,970	39,73,690	43,38,680	49,74,000
State Railways - - -	72,80,974	82,13,650	92,43,628	89,27,040	93,93,000
Irrigation and Navigation -	15,77,510	28,12,571	29,03,100	27,12,374	27,23,000
Madras Harbour Works -	68,360	1,35,835	1,70,710	1,79,754	—
Total - - -	88,98,844	1,15,06,026	1,62,91,128	1,61,57,848	1,70,90,000
Working Expenses:—					
32 Railways.					
Guaranteed Railways - -	6,60,06,040	5,42,75,633	3,67,78,000	3,68,12,032	3,92,53,000
East Indian Railways - -	-	-	1,11,62,190	1,43,76,103	1,43,43,000
State Railways - - -	51,64,940	93,87,067	1,39,93,828	1,34,27,709	1,37,30,000
Total - - -	6,11,70,980	6,36,62,700	6,12,33,608	6,46,15,844	6,63,26,000
33 Irrigation and Navigation -	18,45,610	18,63,006	18,30,510	17,66,550	22,22,000
Madras Canal Company -	5,05,680	5,04,553	5,05,380	5,00,000	5,00,000
Total - - -	23,51,220	23,67,569	23,33,900	22,66,500	27,22,000
Total EXPENDITURE ON PRODUCTIVE PUBLIC WORKS (Working Expenses and Interest) - -	7,34,19,114	7,75,30,285	7,98,60,631	8,30,40,342	8,61,38,000
GRAND TOTAL - - -	9,40,84,146	11,36,12,846	12,10,39,826	11,46,06,590	11,96,24,000

EXPLANATION of the Items entered under the following heads in the preceding Statement.

32.—Railways	—Guaranteed Railways	-	Guaranteed Interest.	Money of surplus profits payable to shareholders.	State charges for control and land
	East Indian Railway	-	Annuity not deferred	Interest on capital of deferred annuity	Surplus profits payable to Company
	State Railways	-	Working expenses of State Railways	classified as Productive Public Works	

ACCOUNT, No II

PRODUCTIVE PUBLIC WORKS RECEIPTS and EXPENDITURE, 1883-84 to 1887-88

REVENUE	1883-84	1884-85.	1885-86	1886-87	1887-88
	<i>Rs</i>	<i>Rs.</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>
XXV Railways.					
Ordinary - - -	11,00	11,25	11,50	11,75	12,00
Subsidised - - -	1,00	2,75	4,00	8,00	15,00
Southern Mahratta -	75	1,50	4,00	5,50	6,50
XXVI. Irrigation and Navigation	8,10	8,20	8,25	8,30	8,35
XXVII Other Public Works -	6,00	6,00	6,00	6,00	6,00
Total RAILWAYS - - -	12,75	15,50	19,50	25,25	33,50
GRAND TOTAL - - -	21,85	24,70	28,75	34,55	42,85
REVENUE FROM PRODUCTIVE PUBLIC WORKS:					
I. Land Revenue (Irrigation and Navigation) - - -	68,65	65,65	67,10	69,10	70,80
XXV Railways.					
Guaranteed Railways -	3,51,35	3,56,70	3,62,80	3,69,15	3,77,00
East Indian Railway -	2,80,00	2,85,00	2,90,00	2,95,00	3,00,00
State Railways - - -	2,19,00	2,28,00	2,48,00	2,58,00	2,78,00
Total RAILWAYS - - -	8,50,35	8,69,70	8,95,80	9,22,15	9,55,00
GRAND TOTAL RAILWAYS - -	8,63,10	8,85,20	9,14,80	9,47,40	9,88,50
XXVI Irrigation and Navigation	28,00	29,00	32,00	34,00	36,00
Total REVENUE FROM PRODUCTIVE PUBLIC WORKS - - - }	9,42,00	9,64,35	9,94,40	10,25,25	10,61,80
GRAND TOTAL - - -	9,63,85	9,89,05	10,23,16	10,59,80	11,04,65
Deficit on Railway Account -	37,05	35,65	29,15	20,40	8,65
Deficit on whole Account -	2,23,60	2,23,40	2,17,70	2,10,20	1,98,50

ACCOUNT, No. II.

PRODUCTIVE PUBLIC WORKS RECEIPTS and EXPENDITURE, 1883-84 to 1887-88

EXPENDITURE.	1883-84.	1884-85	1885-86,	1886-87	1887-88
31. Famine Relief (Protective Works)	Rs	Rs.	Rs	Rs	Rs
Railway - - -	30,00	30,00	30,00	30,00	30,00
Interest - - -	20,00	20,00	20,00	20,00	20,00
Irrigation - - -	25,00	25,00	25,00	25,00	25,00
32 Railways					
Ordinary - - -	26,75	26,75	25,75	21,75	21,75
Subsidised - - -	— 3,25	2,00	5,50	13,25	20,25
Frontier - - -	5,50	2,00	1,50	1,00	50
Southern Mahratta -	9,00	14,00	18,00	22,00	23,00
33 Irrigation and Navigation -	40,90	50,50	52,00	54,50	54,50
34. Other Public Works - -	1,52,00	1,52,00	1,52,00	1,52,00	1,52,00
Total RAILWAYS - - -	68,00	94,75	1,00,75	1,08,00	1,15,50
GRAND TOTAL - - -	3,74,00	3,32,25	3,29,75	3,39,50	3,47,00
EXPENDITURE ON PRODUCTIVE PUBLIC WORKS (Working Expenses and Interest)					
I. Interest on Debt—					
East Indian Railway - -	51,70	53,60	54,70	55,70	56,50
State Railways - - -	98,00	1,02,40	1,06,50	1,12,90	1,20,20
Irrigation and Navigation	36,30	38,10	39,90	41,70	43,50
Total RAILWAYS - - -	1,49,70	1,56,00	1,61,20	1,68,60	1,76,70
GRAND TOTAL - - -	1,86,00	1,94,10	2,01,10	2,10,30	2,20,20
WORKING EXPENSES and INTEREST					
32 Railways					
Guaranteed Railways - -	3,85,25	3,88,25	3,92,00	3,94,00	3,95,75
East Indian Railway - -	1,44,00	1,44,60	1,46,50	1,46,20	1,47,10
State Railways - - -	1,38,20	1,37,25	1,44,50	1,51,00	1,62,10
Total - - -	6,62,45	6,70,10	6,82,00	6,91,20	7,04,95
GRAND TOTAL RAILWAYS - -	9,00,15	9,20,85	9,43,95	9,67,80	9,97,15
33 Irrigation and Navigation -	25,00	26,00	28,00	29,00	31,00
Total EXPENDITURE ON PRODUCTIVE PUBLIC WORKS (Working Expenses and Interest) - -	8,73,45	8,90,30	9,11,10	9,30,50	9,68,15
GRAND TOTAL - - -	11,37,45	12,12,45	12,40,85	12,70,00	13,08,15

No. 5.

DESPATCHE to the Government of India, 16 August 1883, No 231 (Financial).

My Lord Marquis,

Para. 1. I HAVE considered in Council your Excellency's Letter of the 23rd of January 1883, No 29, on the general question of the Railway policy of your Government.

2 You observe that your public works policy must depend in a very great degree on your financial position, and you refer to two elements of uncertainty at the present time which you consider it especially necessary to bear in mind, namely, first, the instability of your standard of value, and the downward tendency of the price of silver, and secondly, the precarious nature of the opium revenue, and you remark that you would regard increased taxation as a greater evil than relatively slow progress in railway construction, more particularly in the case of lines not urgently required as a protection against famine.

3. You assume at the outset that the policy of constructing railways through private enterprise is approved, and you notice the attention which has already been paid by capitalists to Indian railway projects of a productive character, at the same time you point out that private enterprise cannot be expected to provide for those lines which are termed protective, that is, railways needed to give the country protection against famine, but not likely to be financially profitable, at all events to the extent requisite to their being undertaken without aid from the Government. Your Excellency is, therefore, of opinion that it will be necessary to reverse the regulations hitherto in force, and that, instead of applying the funds raised by loan as at present to productive lines, such funds should in future be made available, in aid of the famine grant, for protective lines, leaving to private enterprise all such lines as are sufficiently profitable to attract it

4 It is, however, you observe, of the highest importance to consider how far such a policy may be consistent with sound finance. The railways now constructed by the State are, as a rule, self-supporting, which, under the proposed new system, they need not, and often would not be. It is obvious, therefore, that some limit must be assigned to capital expenditure from funds borrowed for unprofitable lines of railway, and you consider that the possibility of giving practical effect to the new policy depends mainly on the amount of money which it is proposed to sink in investments not expected to yield 4 per cent interest on the capital

5. Your Government has prepared a statement showing the various projected lines of railway which you think call for present consideration, and you divide them into schedules and sub-divisions, according to their character, and the agency by means of which you would desire to see them constructed. The following analysis shows the length of the lines and capital outlay contemplated by you, as being required during the next five years

SCHEDULE A.—RAILWAYS indispensable for Protection or other urgent purposes —

	Miles	Capital
To be constructed by direct Government agency.		
Capital to be raised and interest paid by the Government of India	1,206½	£. 7,727,000
Capital to be raised by the Government of India, interest paid by provincial Governments	585	3,493,000
Capital payable from provincial balances, no interest charged	124	353,000
TOTAL new Lines	1,915½	11,573,000
To which is to be added for working stores for State Railways	-	580,000
" " " additional outlay on open State Railways	-	1,500,000
" " " additional outlay on East Indian Railway	-	1,500,000
		15,103,000
But, as you anticipate a recovery of 500,000 £ by the sale of one line - deduct		500,000
Leaving the Total Outlay to be met by the Government for lines constructed by direct Government agency and the East Indian Railway		£ 14,603,000

SCHEDULE A—continued.

	Miles.	Capital,
To be constructed by Companies on behalf of Government		
Capital to be raised by Guaranteed Companies for open lines -	- -	1,500,000
Capital to be raised by the Oude and Rohilkund and Southern Maharatta Companies, termed "construction and working" Companies, interest being paid by the Government of India -	437½	3,749,000
Capital to be raised by private Companies under a limited guarantee, as in the case of the Bengal Central Railway -	1,484	12,280,000
Total by Companies, the Government paying interest -	1,921½	17,479,000
Making a total outlay by the Government, or on which interest would have to be paid by the Government, of - - - - -		£. 32,982,000

SCHEDULE B.—RAILWAYS desirable, but left to Private Enterprise —

	Miles.	Capital
By Companies to which the Government will give no aid be- yond the grant of land free of cost - - - - -	3,497	£ 24,344,000

6. In the execution of your policy, therefore, it appears that, besides a possible sum of 24,344,000 £ for lines left to unaided private enterprise, a total sum of 32,982,000 £ might have to be raised directly by the Government, or under its guarantee, and spent in the construction of Indian railways during the next five years. Of this amount, 853,000 £ would be supplied from the provincial balances, and 300,000 £ annually, or 1,500,000 £ in all, from the Famine Insurance grant, you would also provide 11,420,000 £, under a guarantee of interest during construction, which would require for five years on an average, 200,000 £ a year, to be paid from the Famine Insurance grant; the old guaranteed companies would supply 1,500,000 £; and the remaining amount of 16,809,000 £ (including, as I suppose, the 810,000 £ for the Bhagwangola line, not admitted into the class on which interest would be charged against the Famine Insurance grant) you would borrow, or raise through construction or working companies, the interest being paid by the Government. Deducting from this 1,500,000 £ allowed for the East Indian Railway, there would remain 15,309,000 £ for construction of new State lines; and you anticipate that the increase of the net revenue of the various lines of railway in the next five years will be more than sufficient to discharge the additional interest which would accrue on this part of the outlay. Besides this, you propose to allot to the Public Works Department annually for irrigation and navigation works, 250,000 £ from the protective grant, and 700,000 £ from borrowed funds, so that the whole sum to be raised at the direct charge of the Government in the five years would be 20,309,000 £, or, say, 4,000,000 £ yearly, of which 700,000 £ would be for irrigation works, and 300,000 £ for the East Indian Railway, leaving for new railway construction 3,000,000 £ in addition to about 300,000 £ provided from the protective grant, or, in all, 3,300,000 £, besides the sum provided for lines under guarantee of interest during construction, and from provincial balances

Capital Outlay on Railways.	£
State Lines - - - - -	14,685,000
Bhagwangola Line (included in Limited Guarantee Lines) -	810,000
Construction and Working Companies' Lines - - - - -	3,749,000
Old Guaranteed Lines - - - -	1,500,000
Limited Guarantee Lines (excluding Bhagwangola) - - - - -	11,420,000
	£ 32,982,000
Provision of Capital for Railways	
From Provincial Balances - - -	853,000
From Famine Insurance annual Grant, 300,000 £ x 5 - - - - -	1,500,000
To be raised by Limited Guarantee Companies, interest charged against 200,000 £ a year of Famine Insurance Grant - - -	11,420,000
To be raised by Old Guaranteed Companies - - - - -	1,500,000
	15,273,000
To be raised by Government —	
For East Indian Railway - - - - -	£. 1,500,000
For other Lines - - - - -	11,500,000
	£. 13,000,000
To be raised by Construction and Working Companies - - - - -	3,749,000
	16,809,000
	£. 32,982,000

7. At the end of the five years you would, without reckoning any lines which might be constructed by unaided private enterprise, have an addition of 3,837 miles to the railway system of India, while the debt bearing permanent interest (including that contracted for irrigation works) would have been increased by about 20,000,000 <i>l</i> , besides 1,500,000 <i>l</i> added to the guaranteed capital of the old companies, and interest would also be temporarily guaranteed on a further sum of 11,420,000 <i>l</i> . Besides this, not less than 3,600,000 <i>l</i> would be spent from the protective grant and provincial funds, and possibly some further amount from surplus revenues. In all, the outlay on productive and protective works, as proposed by you, would be nearly 37,000,000 <i>l</i> in the five years, or on the	
<i>Sum to be Borrowed.</i>	
By Government - - -	£
For East Indian Railway - - -	1,600,000
For other State Railways - - -	11,560,000
For Irrigation (700,000 <i>l</i> × 5) - - -	3,500,000
	£
	16,560,000
By Construction and Working Companies - - -	8,749,000
	£
	20,309,000
<i>Total Capital Outlay on Public Works</i>	
To be borrowed - - -	20,309,000
By Old Guaranteed Companies - - -	1,500,000
By Limited Guarantee Companies - - -	11,420,000
From Protective Grant (550,000 <i>l</i> × 5) - - -	2,750,000
From Provincial Balances - - -	853,000
	£
	36,832,000

average not far from seven and a half millions annually.

8 Your Excellency's proposal, as is recognized in your letter, involves a complete reversal, in many of the most important points, of the rules which have been in force for some years regarding the construction of productive public works, and which were carefully codified and reaffirmed little more than two years ago, in Lord Hartington's Despatch of the 6th of January 1881, No 1 (Financial)

9 In arriving at the conclusions thus epitomized, two main considerations appear to have weighed with you, namely, a sense of the necessity for the speedy construction of such railways as are urgently required for giving the country protection against famine, and the desire to attract private enterprise to railway construction in India

10 As regards the first point, namely, the necessity for the speedy construction of railways urgently required for giving the country protection against famine, the proposals of your Excellency go far beyond what seems to have been contemplated by the Famine Commission*. It was estimated by the Commission that an expenditure of two and a-half millions a year would in the course of 25 years provide 10,000 miles of railways, which would suffice, on the average, to bring every part of India within 25 miles of a railway. But this, they stated, would probably be greatly in excess of the present needs of the tracts for which protection was required, and they thought that an addition of 5,000 miles to the lines already existing would go far to remove all risk of serious difficulty in supplying food to every part of the country. They went on to say that they trusted that nothing might stand in the way of an early return to the former scale of grants, or to the adoption of some equivalent form of aid; and their propositions, therefore, contemplated no such sudden expansion of operations as you suggest, involving an annual outlay by Government and private agency of nearly three times the amount of two and a half millions a year at present authorised from borrowed money.

11 In comparing the classification of the various lines or systems of railway contained in the Schedule A, accompanying your letter, with the Famine Report, I observe that, in the opinion of the Commissioners, many of the lines described in the Schedule would not have been deemed by them to be protective in the strict sense of the word. In particular, the two systems to which you propose to pay interest from the Famine Insurance grant during construction, the Bengal and Nagpoor line, and the lines from Bhopal to Gwalior and Jhansi, appear to me to have no greater claim to this character than could be advanced in behalf of every railway. Apart, therefore, from the general question of the expediency of granting interest in this manner, I should consider the application of the Famine Insurance grant to these lines as inadmissible.

12 But there are other serious considerations which arise in connection with such a largely increased expenditure upon public works as has been advocated by your Government. The rapid construction of railways upon a large scale in Europe and America has been accompanied by a rise in the price of labour and materials which has seriously detracted from their financial success, and experience has shown that India is no exception to this rule. Nor should the extent to which the value of Indian securities might be affected by the new loans which would be necessary to provide for this expenditure be overlooked at a time when a serious depreciation in the price of rupee paper has taken place, owing partly to the want of confidence which is felt in the future value of silver, and partly to the large sales of that security which have recently been made in the London market.

13 It is, however, very far from my intention to disregard the representations of the Famine Commission, and the strong recommendations of your Government on this occasion and in 1881, in favour of an extension of railways in India, on the contrary, I am deeply sensible of the importance of increasing the means of railway communication, not only with a view to avert or mitigate the effects of future famines, but also to aid in the development

development of the agricultural resources of the country by affording additional facilities and new outlets for foreign trade

14 Lord Hartington, in his Despatch of the 6th of January 1881, after observing (in para. 10) that unquestionably there still remained many works which, considered wholly on their merits, it might be desirable to undertake, but the completion of which, by reason of the limits and restrictions then imposed, it would be necessary to postpone, went on to say that he recognised the justice of the principle laid down by the Select Committee of the House of Commons, that "the amount to be annually expended upon Productive Public Works should mainly depend upon the financial condition of India," and that the limit of 2½ millions then fixed was therefore only temporary. He continued as follows — "I shall be glad if, at some future time, the condition of the finances is such as to justify your Excellency's Government in recommending, and Her Majesty's Government in sanctioning, an extension of that limit. Should your Excellency at any time think it desirable to raise again the question of principle, I shall be prepared to give my consideration to any observations which your Excellency may think fit to make. But I must remark that, so long as the normal military expenditure of the Government of India remains uncertain, pending the final settlement of affairs in Afghanistan, the question of taxation in India remains in its present unsettled condition, and many other parts of the fiscal system are manifestly in a state of transition, I am not of opinion that the moment will be opportune for effecting any modifications in the principles enunciated in this Despatch."

15 The condition of affairs has happily much improved as compared with that described in these instructions. Since the resolution was taken to restrict the sum to be spent from borrowed money to 2½ millions yearly, the progress in the net revenue of the works classed as productive has been continuous and satisfactory. The deficit which existed when the Committee of the House of Commons made its Report in 1879, on account of working expenses and charges for interest on debt in connection with these works has been converted into a considerable surplus. The general condition of the finances has likewise greatly improved with the cessation of the warlike operations on the North-west frontier, and the returning prosperity of the country after the effects of the famine period of 1876-78 had passed away, and the surplus revenue has admitted of important fiscal improvements and reductions of taxation, notwithstanding which reductions there is a prospect of a continued surplus in future years.

16 I concur, therefore, with your Excellency in the opinion that the time has arrived when it is proper to consider whether the limits within which the application of public money to railway extension in India is at present confined, may not safely be extended, but, in view of the Resolution of the House of Commons, which was mentioned in the 31st paragraph of my Despatch, No. 183, of the 28th of June last, and which has since been adopted on the 27th of July, I do not consider myself at liberty at this moment to sanction measures which would cause any serious departure from the rules by which your expenditure in this branch of the public service is now governed.

17 Independently of this consideration, the proposals now before me are of so wide a scope, amounting, as I have already observed, to a reversal in some respects of a policy which was approved and recommended by the Committee of the House of Commons, in their Report in 1879—they affect so many questions both as to the form which increased expenditure of this description should take, and as to the future liabilities of your Government—that it appears to Her Majesty's Government, especially having regard to the important recommendations of the Famine Commission with respect to railways, which have been made since that Report, that it would be undesirable to authorise their adoption, in whole or in part, without renewed Parliamentary inquiry.

18 Her Majesty's Government have, therefore, decided early next Session to propose the appointment of another Select Committee of the House of Commons, to re-examine the question of the policy which should be pursued with a view to the extension of railway communication in India, with especial reference to the recommendations of the Famine Commission with respect to "protective" lines.

19 Pending the Report of this Committee, I shall abstain from expressing any opinion on the various questions of railway policy raised by your Despatch

I have, &c.
(signed) Kimberley

No. 6.

LETTER from the Government of India, 24 September 1883, No 269
(Financial)

My Lord,

We have had the honour to receive your Lordship's Despatch, No. 231 (Financial), dated the 16th August 1883, in reply to our proposals of January last, on the general question of railway policy in India.

2. After a summary of our preliminary remarks, your Lordship presents, in paragraphs 5 to 7, a complete transposition of the figures of our proposal, working up to the result that the outlay on Productive and Protective Public Works of all kinds, as proposed by us, "would be nearly 37,000,000 *l* in the five years, or, on the average, not far from 7½ millions annually." To this, as a general statement, we have no exception to take, but we would point out—

(a) That as 2,353,000 *l* will be provided out of ordinary revenue (viz, 853,000 *l* out of Provincial Balances, and 1,500,000 *l* out of the Famine Grant), only 29,729,000 *l*, and not 32,082,000 *l*, will have to be "raised directly by the Government or under its guarantee" for outlay on railways,

(b) That the 810,000 *l* for the Bhagwangola Line will be raised by a limited guaranteed company, though the charge for interest will be met out of ordinary revenue, and not out of the Famine Grant,

(c) That by the end of the five years the temporary interest charge (which will be on 12,230,000 *l*, including the Bhagwangola Line, and not only 11,420,000 *l* as stated) will be on the point of disappearance.

3. We would also, however, present another summary of our five-year programme, which we hope may tend to place it in a clearer light —

A.—To be borrowed by the State direct—		£.
(1) Present fixed Grant for Productive Public Works, 2,500,000 <i>l</i> × 5 =		12,500,000
(2) Annual addition thereto, 350,000 <i>l</i> × 5 =		1,750,000
(3) East Indian Railway further capital	} for open lines - -	1,500,000
(4) Guaranteed Railways ditto		1,500,000
TOTAL of A. - - - £		17,250,000
B.—To be borrowed by—		
(5) "Construction and Working" Companies on behalf of the State, interest charge permanent		3,749,000
(6) "Limited Guarantee" Companies on their own behalf, interest charge on State, temporary		12,230,000
TOTAL of B. - - - £		15,979,000
C.—To be provided from Ordinary Revenue—		
(7) From annual Famine Insurance Grant, 300,000 <i>l</i> + 250,000 <i>l</i> = 550,000 <i>l</i> × 5 =		2,750,000
(8) From Provincial Balances, 500,000 <i>l</i> + 353,000 <i>l</i> =		853,000
TOTAL of C. - - - £		3,603,000
GRAND TOTAL - - - £		36,832,000

The average annual outlay would, therefore, be 7,366,400 *l*. It should be thoroughly understood that, of these items, Nos. 1, 3, 4, 1,500,000 *l* out of No 5 and No 7 are normal, existing previous to and irrespective of our proposals, No 8 is also normal, as the balances are now available, and allowed to be devoted to the purpose. Items Nos 2, the rest of 5 and 6, are alone the outcome of our proposals, but the temporary liability for No 6 is all, except 32,000 *l* per annum, to be met out of the normal Famine Insurance Grant, so that No 2 and part of No 5, involving a permanent annual charge of 70,000 *l*, + 89,000 *l* = 159,960 *l*, together with the temporary 32,000 *l* just referred to, is the only

new

new burden which we desire to incur. The share for the first year will be only one-fifth of these amounts, or 38,000 *l*.

4 Our proposals undoubtedly involve, as we were originally careful to explain, a complete inversion of the rules now in force, the effect of which has been proved to be that funds are available for highly remunerative lines, but not for others less financially promising, though far more urgently needed. But we would point out, with reference to your Lordship's 8th paragraph, that these rules have only been applied with stringency of late years, and that previous to 1879-80 there was more of the latitude which we desire to restore.

5 They are, however, also described in your Lordship's 10th paragraph as a "sudden expansion of operations," and "involving an annual outlay by Government and private agency of nearly three times the amount of 2½ millions a year at present authorised from borrowed money." In this description there would seem to be some misconception. Between the 7½ millions annually, which we contemplated as the capital outlay on productive and protective public works of all kinds for five years, and the 2½ millions fixed in 1879 as the limit to be borrowed for productive public works only, there can be no ratio or comparison whatever. The annual amount now applicable to the purposes which our proposals comprise is not merely 2½ millions, but may be described as follows.—

	£.
(1.) Productive Works Loan - - - - -	2,500,000
(2) Loans for East Indian and Guaranteed open lines, £ $\frac{3,000,000}{5}$ = average annual estimate - - - - -	600,000
(3) Loan for Oude and Rohilcund extension, already sanctioned £ $\frac{1,500,000}{5}$ = average annual estimate - - - - -	300,000
(4) Famine Insurance Grant—	
£ 500,000 proposed to be temporarily applied to "limited guarantee" of £ $\frac{11,000,000}{5}$ = - - - - -	2,234,000
£ 500,000 for Capital outlay as hitherto - - - - -	550,000
(5) Ordinary, for Bhagwangola line £ $\frac{810,000}{5}$ = - - - - -	162,000
(6) Provincial Balances now applicable to Capital outlay £ $\frac{858,000}{5}$ = - - - - -	170,600
* Total Annual Resources at present - - - - - £	6,566,600

We need scarcely explain that the requirements of the East Indian and Guaranteed open lines are at present met by loan "outside" the 2½ millions for productive works, and that the Oude and Rohilcund item is inserted, because it happens to be comprised in our proposals, and its omission would vitiate the comparison with them. The fact that capital expenditure on public works is not confined to 2½ millions was effectively brought out by Lord Hartington, in his reply to the Manchester Chamber of Commerce, in December 1881, but our annual resources are unfortunately far below the eight millions which his Lordship was then able to show.

6 Instead, therefore, of our proposals being to treble existing annual outlay, as might be supposed from the remark which we have quoted from paragraph 10 of the Despatch under reply, they amount only to an increase of it by 799,800 *l*, or 12 2 per cent., and of this increase only 350,000 *l* is an addition to the annual 2½ millions of permanent debt raised by the State, the remaining 449,800 *l* being capital raised independently in the market by a "construction and working" company.

7 A comparison with the accounts of past years will perhaps be useful in judging whether the expansion thus proposed can justly be deemed either sudden or excessive.

8 We append a statement (Enclosure No. 1) showing the total capital outlay, actual and estimated, on railways during the last 25 years. The average is just five millions a year. Our proposals for railways only contemplate an annual outlay under all designations amounting to 6,416,400 *l*, but 2,446,000 *l* of this is capital to be raised by companies, for which we shall have no liability whatever when the "limited guarantee" expires in five or seven years. If this be deducted, there remains an outlay of 3,970,400 *l*, of which 470,600 *l* will be provided from ordinary income and balances, against the 25 year average of five millions, of which 319,773 *l* came from similar sources.

Again,

* The annual charges for the Southern Mahratta, the Bengal-Central, the Bengal and North-Western, the Rohilkhand-Kumaon and other assisted companies already started before January last are of course not included here, as they did not come within our proposals, with which this comparison is made.

Again, the statement shows that in the five years from 1859-60 to 1863-64 the outlay for railways only was 6,394,277 *l* per annum. The whole of this was borrowed by the guaranteed companies at 5 per cent, and the permanent charge for interest on it was 319,713 *l* per annum, whereas the interest charge at 4 per cent. on the actually smaller sum of 5,945,800 *l*., now to be raised, will be only 237,832 *l*. per annum, and of this 97,840 *l* will be temporary. It is even possible that portions may be raised on debentures at 3½ per cent. Moreover, it should be borne in mind that the system under which our proposed liability will be incurred is not, as in those years, the old guarantee system, which has been found to be in various ways objectionable.

Moreover, these large loans, at a high rate of interest, were raised at a time when the railway transactions were a heavy and steadily progressive loss to the State, as shown in the margin,* whereas now they are the reverse, the net gain from Guaranteed and State Railways in the current year being placed at 611,696 *l* in the Budget Estimate. There can be no doubt that the country and finances are far better able to bear a heavy charge for interest now than 25 years ago, whereas the charge now to be imposed is lighter, and will be set off by gain instead of being supplemented by loss.

	Loss.
	£
1859-60 -	796,872
1860-61 -	1,096,332
1861-62 -	1,396,991
1862-63 -	1,541,140
1863-64 -	1,634,634

Finally, 4,500,000 *l*., or 900,000 *l* per annum, of the total sum which it is proposed to raise is to be expended on railways open to traffic, and chiefly on purchase of additional rolling stock, and on other demands caused by increased traffic. Such outlay is almost necessarily at once remunerative, and may be expected, from the first, to be no additional burden, but rather to yield a net surplus after paying its whole share of interest. In fact, the supply of additional capital for open lines is a charge at once inevitable, indeterminate, and satisfactory as evidence of the expansion of their traffic. It might well be left out of account altogether in the present discussion.

9. We append also a statement (Enclosure No. 2) showing the total capital outlay charged to the Productive and Protective grants on account of "Irrigation and Navigation," and of the Madras harbour for the 17 years since "Productive" outlay commenced. The average is 1,360,000 *l* per annum. Adding this to the railway average of five millions, the total for works of the class with which our proposals deal is 6,360,000 *l*. Upon this total average they involve an increase of only 16 per cent.

10. It will, perhaps, tend to place in a clearer light our proposals, which relate to railway extension only, if we eliminate altogether both "Irrigation and Navigation" and additional capital for open lines, in respect of neither of which is it proposed to alter existing practice. The result is to reduce our proposals to an annual capital outlay on railways of 5,516,400 *l* for five years, which may be compared with 4,716,600 *l* under the present system, as shown in paragraph 5 (similarly reduced by 950,000 *l* + 900,000 *l* = 1,850,000 *l*). The increase is 799,800 *l* per annum, as already stated in paragraph 6, and the percentage of increase is 16.9, but, as there explained, only 350,000 *l* of it involves any permanent liability.

11. We trust that the preceding figures will have satisfied your Lordship that the expansion we propose, so far from being excessive, is less in amount, and far less burdensome, than the outlay which was thought necessary 25 years ago, when the country and finances were in a far less advanced and flourishing state, that it is but a moderate advance upon existing arrangements, and that it cannot be termed sudden when compared with the continuous policy previous to the restrictions of 1879; restrictions which your Lordship and the Famine Commissioners concur with us in holding to require relaxation.

12. We will now turn to the question mooted in your Lordship's 10th paragraph, whether our proposals "go far beyond what seems to have been contemplated by the Famine Commission."

The Commissioners, in the passage referred to,† merely allude to 2½ millions a year as "about the amount that has for some years past been appropriated yearly to the extension of railways." But they promptly condemn this amount as insufficient, remarking as follows, in a passage of which only a portion has been quoted in the Despatch under reply—

"11. We are strongly of opinion that the policy which has led to the investment of borrowed capital in railway extension should not be abandoned, and we must express our concern that the apprehension of financial difficulties should have led to its partial suspension, and our hope that nothing may stand in the way of a very early return to the former scale of grants for this paramount object, or to the adoption of some other equivalent form of aid."

The Commissioners thus strongly recommended, therefore, not an outlay of 2½ millions, but the "former scale of grants." If the "former scale of grants" be held, as it reasonably may, to mean the grants for Productive Public Works for the two years preceding the restriction,‡ or even, say, 4½ millions a year, then the Commissioners' recommendation

* See Enclosure No 3

† Part II, Chapter V, Section IV., paragraph 10.

Regular Estimate, 1877-78 - - - - - £. 4,877,000

Budget " 1878-79 - - - - - 4,553,000

is tantamount, after allowing three-quarters of a million for the Famine Insurance grant, to an increase of the annual loan from 2½ to 3½ millions. The increase we have ventured to recommend is, as shown in paragraph 6, only a little over three-quarters of a million instead of 1½ millions, and more than half of it involves temporary instead of permanent liability

Agam, the 5,000 miles of railway preliminarily recommended by the Commission were all "additional mileage required for security," whereas the 3,837 miles comprised in our Schedule A unavoidably comprise a considerable mileage of lines in progress, some of which cannot be deemed of any special protective value "Deducting these, which may be roughly estimated at 478 miles, costing £. $\frac{3,473,000}{4} = 695,000$ l per annum,* or the greater part of our proposed increase, it might even be contended that our scheme involves no new provision for famine protection whatever, excepting the permission to apply loan funds to works not likely soon to pay 4 per cent.

13 On the above grounds, we submit that our proposals do not go far beyond those of the Famine Commission, but the reverse, and that they are open to a charge of insufficiency, rather than of excess

14. In paragraph 11 of the Despatch it is observed that "many of the lines described in the Schedule would not have been deemed by them (the Famine Commissioners) to be protective in the strict sense of the word" The Nagpur-Bengal and the Bhopal-Gwalior-Jhansi lines in particular are stated "to have no greater claim to this character than could be advanced in behalf of every railway," and the application of the Famine Insurance Grant to them is ruled to be inadmissible. We have already pointed out that Schedule A unavoidably included lines in progress, whether protective or not, and in its heading "other urgent purposes" are mentioned as well as protection from famine. As regards the rest, and our classification in general, it is to be regretted that the Famine Commissioners have given no detail of the lines actually embraced in their calculation of 5,000 additional miles "required for security" They have, however, indicated very clearly that they consider a line to be "protective" not merely if it runs through a famine-stricken tract, but also if it will convey produce to such a tract from other food-producing localities which are permanently or may be temporarily better favoured

15 Judged by this standard, we consider the Nagpur-Bengal line to be eminently protective In paragraph 42 of our Despatch, No. 132 (Railway), of the 18th ultimo, which had not reached your Lordship when the Despatch now under reply was issued, we wrote as follows.—

"42 But equal to, or it may be greater than, either of the indirect advantages just named in its pecuniary value to the State, and freight also with influence on human life, is the protective effect of this line in time of scarcity or famine. Chhatisgarh is a region which has now been ascertained meteorologically to be favoured with a rainfall more uniform, constant and sufficient, from year to year, than any other in India. It is thus, while almost exempt, except on very rare occasions, from risk of famine, able to come with grain supplies to the aid of other provinces where scarcity or famine prevails. But railway communication is indispensable to the use of this gift with promptitude and sufficiency. The risk which the province itself ran during the dearth of 1869 for want of such communication is described in Mr. Morris's Minute of 6th March 1874. The great additional help it might have afforded, had such existed during the famine of 1876-78 in Southern and Western India, is obvious, and was recognised by Sir John Strachey in the latter year, in the following remarks on the Nagpur-Chhatisgarh Railway—

"It is of urgent necessity to supply means for its construction at the earliest possible moment, as it will be specially useful as a means of bringing food-grains down to the main line of railway in the Deccan, and be thus of great value in time of scarcity, as has been very truly remarked by Sir Andrew Clarke'

"Supposing the line now under consideration to be constructed, the whole resources (vastly increased) of the tract referred to will be available at either end for famine relief of Behar and Bengal on the one hand, and of Western and Southern India on the other. Moreover, the addition hereafter of a branch to Cuttack will render impossible in Orissa a disaster such as that of 1869, while the connection of Bilaspur with Bundelkhand and Northern India will be a most important safeguard against famine in that quarter

"In fact, so important do we consider the protective aspect of this project, that we should have been prepared to recommend it to your Lordship as a protective work, had any necessity existed for doing so."

Chhatisgarh, in short, is a vast granary needing only adequate railway communications to develop it fully, and to make it an effective succour to all the five provinces of India which have suffered most from, and are most liable to, famine.

16 By the same standard, in both its aspects, the railway from Cawnpore and Gwalior to Jhansi and thence to Bhopal possesses great protective value In our Despatch, No 130 (Railway), of the 18th ultimo, which also had not reached your Lordship when the reply was issued, we explained in considerable detail the liability to famine of the districts

See margin of page 170, paragraph 9.

vide paragraph 20, (c) of this Despatch, and Despatch, No. 83, R., dated 2nd June 1883.

*See the column "Class of Project," in Schedule A of our Despatch, No 29, Finance and Commerce, of 23rd January 1883.

districts of Banda, Hamirpur and Jhansi, through which the Jhansi-Manickpur Railway (since sanctioned by telegraph) would pass. That description applies with equal truth and force to the whole of the line now in question as far south as the frontier of Ithopa, Cawnpore, Calu, Jalaon, Jhansi and Lalitpur, as well as the Native States south of Agra, which this line will actually traverse from end to end, are specifically named in the extracts we gave from the records of past famines. In 1837-38 these districts felt the full force of the calamity, in 1860-61 they were more slightly affected, but in 1868-69 again the region of "acute" famine lay in Jhansi, Lalitpur, and generally in the south-west of the whole famine-stricken tract, which embraced the whole of Bundelkhand. In 1873-74 Jhansi and Jalaon are specially named as suffering, along with the districts further east, and in 1877-78 Cawnpore, Jhansi, and Lalitpur were again affected. We may add that the protective character of all these Bundelkhand railways has been assumed without demur throughout our correspondence with your Lordship regarding their construction in connection with a lease of the Rajputana-Malwa Railway. Regarding the Native States south of Agra our records for these later famines are imperfect, but they are known not to have escaped. Finally, our Despatch, No. 140 (Railway), of the 8th instant, has shown that the entire tract commanded by this line has narrowly escaped famine during the current year, and that the Lieutenant Governor of the North-Western Provinces repeats representations of the urgency of its construction on famine-protection grounds.

But, in addition to passing through a tract repeatedly famine stricken, this railway will possess the second element of protectiveness by becoming, in connection with the Etawa-Bilaspur Railway, the channel for conveying food-grains from Chhatisgarh to the whole of Bundelkhand, Rohilkhand, Northern Rajputana, and the Punjab. This entire tract, and not merely that traversed by the line itself, has narrowly escaped famine this season, and it is impossible to over-estimate the value which such a resource, if now provided in time, will possess on some future occasion when the result is unfortunate. On the other hand, should famine occur in Bombay or Southern India, this line will be the most effective means of hurrying down in their relief the resources of Bundelkhand and Rohilkhand, which are greatly redundant in ordinary seasons.

17 We trust that the preceding representations may induce your Lordship to reconsider the question of the debit of the temporary liability for these two railways, the Nagpur-Bengal and the Cawnpore-Gwalior-Bhopal, to the Famine Insurance Grant. We may add that, as both the lines will be not only "protective" but "productive," the advance is not likely to be very long outstanding. If, however, the system of debit to capital of interest during construction, and transfer of the guarantee to a period from the date of opening, should be adopted, the Famine Insurance Grant will be relieved for some years, and all present difficulty on this score will disappear.

18 In paragraph 12 of the Despatch it is remarked that "such a largely increased expenditure upon public works as has been advocated" by us may be "accompanied by a rise in the price of labour and materials," such as has, in the case of rapid railway extensions in Europe and America, "seriously detracted from their financial success." We trust that we have shown that, as regards any large increase having been proposed, there has been a misapprehension. The outlay we contemplate will not exceed that (including expenditure from balances) which is provided for the current year, or which has been incurred in many previous ones. But were this not so, we consider that no comparison can be between the 4,000 miles per annum made in a sparsely-peopled country like America and the $\frac{3,857}{2} = 768$ miles per annum which it is proposed to make in various and widely-separated portions of a country like India, having a large population, and good general supply of labour, both skilled and unskilled.

19 In the second part of paragraph 12 it is suggested that the new loans which would be necessary to provide for the proposed increase of expenditure might affect the value of Indian securities. It will be seen from paragraph 3 that the only new loans which we propose are (1), an addition of 350,000 *l* to the existing annual State loans, and (2), the raising by private companies of $\frac{15,275,000}{4} = 3,195,800$ *l*. per annum.

With regard to the first, we may observe that it is entirely contrary to our past experience to suppose that the value of Indian securities is affected by a variation of half a million, more or less, in the annual loan. We do not propose so large an increase even as that.

With regard to the second, we would point out that the amount to be raised by companies is far less than that which has been raised by similar agency in past years.

† Bengal Central -	-	£	1,250,000
Southern Mahratta -	-	£	3,600,000
Bareilly-Ramnagar -	-	£	250,000
Bengal and North-Western -	-	£	3,035,000
Total -	£	£	8,135,000

During the 13 years from 1859-60 to 1871-72, the guaranteed companies borrowed (as will be seen from Enclosure, No. 1) nearly 5½ millions per annum, without, as far as we are aware, affecting the Indian Government securities injuriously. But more than this, we may adduce the fact that above eight millions sterling† have, with your Lordship's sanction, been lately placed in little more than 12 months on the London market by private railway companies, without prejudicial effect on those securities being observed or alleged.

20. We

* On this subject, see Government of India's Despatches, No. 132, B, of 18th August 1882, paragraph 37, and No. 140, B, of September 8th, paragraph 3.

20. We learn with much satisfaction, from paragraphs 13 to 16 of the Despatch under reply, that your Lordship is deeply sensible of the importance of increasing the means of railway communication, with a view, not only to avert or mitigate the effects of future famines, but also to aid in the development of the agricultural resources of the country, by affording additional facilities and new outlets for foreign trade; and, further, that your Lordship recognises that the fact of the prospect, notwithstanding reductions, of a continued surplus in future years, justifies a consideration of the propriety of extending the limits of public outlay on railways. We much regret that there should be any delay in the settlement of this question, but must admit the propriety of referring to another Select Committee of the House of Commons the point of an extension of the limit, and a change in the application enjoined by a former Committee in respect of the annual Public Works loan. At the same time, we would submit for your Lordship's consideration whether the latitude hitherto recognised in respect of concessions to private companies, under which your Lordship has allowed the four named in paragraph 19 to be started, might not be extended to embrace the Nagpur-Bengal and the Bhopal-Gwalior-Cawnpore, in consideration of the protective as well as commercial urgency of these projects, of the fuller information regarding the former and the famine warning regarding the latter which have been afforded since your Lordship's Despatch was issued, and also of the trouble and expense to which the very competent syndicates, who are ready to undertake them, have been put in the course of the protracted negotiations which have already taken place.

21 In conclusion, we would advert briefly to the remark, in paragraph 9 of the Despatch, that "two main considerations appear to have weighed" with us in arriving at the conclusions on which our proposals are based, "namely, a sense of the necessity for the speedy construction of such railways as are urgently required for giving the country protection against famine, and the desire to attract private enterprise to railway construction in India." We trust that we may not be supposed in any way to confound the means with the end

As regards means, we undoubtedly think that there are many advantages to be secured, and various compensations to be found for such pecuniary sacrifice as may be occasioned by the employment of private enterprise, even if aided to a limited extent by the State. On this point we are at one with the Famine Commission (Part II., p. 171), and with the views of Lord Salisbury and Lord Hartington in their Despatches indicated in the margin, and we are further impelled to use this private agency, without any intention of entering on a discussion of its abstract merits in comparison with State agency, by the fact that only by enlisting it in addition to the latter can we hope to provide for India with sufficient speed the railways she requires

No 205, F, dated 21
January, 1877, paras.
26-28
No 54, R, dated 6
April 1882, paras.
13-18.

But our end is not, in any degree, the introduction of private enterprise merely for its own sake, but rather that speedy provision of railways which India urgently needs, in order, on the one hand, to avert or mitigate the effect of famine, and, on the other, to develop her resources, to enrich her people, and to counteract the falling value of silver. Of this twofold end, the first portion is by far the more important, in its relation to human life, as well as to material resources, and we would repeat the warning conveyed in paragraph 14 of our previous Despatch against avoidable delay in its satisfactory attainment. One half of the decade within which severe famine is computed to occur has already passed away without any material advance having been made. We hold it to be of the highest importance that if a calamity, such as that threatened this year, should unfortunately supervene before adequate preparations have been made, no responsibility should rest on the British Government

We have, &c.
(signed) Ripon.
D. M. Stewart.
T. F. Wilson.
C. P. Ilbert.
S. C. Bayley.
T. C. Hope.

I.—STATEMENT of CAPITAL OUTLAY on RAILWAYS for the 25 Years ending 1883-84

Y E A R	Guaranteed Railways	East Indian Railway.	STATE RAILWAYS				TOTAL.	REMARKS.
			Productive Public Works.	Ordinary	Frontier	Protective Works.		
	₹.	₹.	₹	₹	₹	₹	₹.	
1859-60	7,171,464	-	-	-	-	-	7,171,464	
1860-61	7,578,715	-	-	-	-	-	7,578,715	
1861-62	6,602,212	-	-	-	-	-	6,602,212	
1862-63	5,863,344	-	-	-	-	-	5,863,344	
1863-64	4,755,653	-	-	-	-	-	4,755,653	
1864-65	4,122,240	-	-	-	-	-	4,122,240	
1865-66	5,636,866	-	-	-	-	-	5,636,866	
1866-67	7,297,703	-	-	-	-	-	7,297,703	
1867-68	7,120,081	-	594	-	-	-	7,120,675	
1868-69	3,867,927	-	552,398	-	-	-	4,420,325	
1869-70	4,742,851	-	190,870	3,984	-	-	4,937,705	
1870-71	3,770,270	-	449,372	5,956	-	-	4,231,598	
1871-72	2,496,728	-	644,620	2,816	-	-	3,144,164	
1872-73	477,245	-	1,413,649	10,832	-	-	1,901,726	
1873-74	693,953	-	2,354,625	32,766	-	-	3,080,444	
1874-75	1,087,911	-	3,014,180	105,193	-	-	4,207,284	
1875-76	950,808	-	3,165,184	66,279	-	-	4,182,269	
1876-77	715,459	-	2,865,861	27,287	-	-	3,608,607	
1877-78	1,323,984	-	3,984,968	71,394	-	-	5,380,346	
1878-79	1,012,633	-	3,327,888	220,850	-	-	4,561,361	
1879-80	30,590,156	30,804,248	2,680,493	471,410	1,334,350	-	4,760,265	
1880-81	434,790	418,435	2,553,620	77,003	2,293,615	-	5,777,463	
1881-82	672,435	455,262	1,635,151	247,673	224,682	614,551	3,849,754	
Total Actual	47,870,224	31,677,945	28,833,473	1,343,443	3,852,647	614,551	114,192,283	
1882-83	409,693	263,200	1,674,400	438,900	281,500	-187,100	2,940,593	
1883-84	1,227,900	424,000	2,395,000	610,400	67,500	1,012,500	5,637,300	
TOTAL - ₹	49,507,817	32,365,145	32,902,873	2,282,743	4,201,647	1,499,951	122,770,176*	
Average - ₹.	1,980,313	6,473,029	1,935,463	152,849	840,329	499,983	4,910,807	

* Adding to this the outlay on the Southern Mahratta and Bengal Central Railways, the Total becomes 125,061,000 L, and the Average about 5,000,000 L a year.

II.—IRRIGATION and NAVIGATION

SUMMARY OF CAPITAL OUTLAY ON PRODUCTIVE PUBLIC WORKS

Y E A R	Outlay from Loan Funds.	Deduct Outlay formerly treated as Productive now transferred to Ordinary	Net Total	Add Outlay formerly treated as Ordinary now transferred to Productive.	GRAND TOTAL.
	£	£	£.	£	£.
1867-68 - - - - -	219,255	- -	219,255	- -	219,255
1868-69 - - - - -	468,849	- -	468,849	- -	468,849
1869-70 - - - - -	2,007,361	- -	2,007,361	- -	2,007,361
1870-71 - - - - -	718,438	- -	718,438	- -	718,438
1871-72 - - - - -	983,854	- -	983,854	- -	983,854
1872-73 - - - - -	770,920	- -	770,920	- -	770,920
1873-74 - - - - -	1,198,682	- -	1,198,682	- -	1,198,682
1874-75 - - - - -	1,235,391	- -	1,235,391	- -	1,235,391
1875-76 - - - - -	1,105,445	- -	1,105,445	- -	1,105,445
1876-77 - - - - -	943,423	- -	943,423	- -	943,423
1877-78 - - - - -	806,084	- -	806,084	- -	806,084
1878-79 - - - - -	794,654	- -	794,654	- -	794,654
1879-80 - - - - -	598,837	- -	598,837	- -	598,837
1880-81 - - - - -	614,450	342,289	272,161	5,134,396	5,406,467
1881-82 - - - - -	565,804	- -	565,804	619,084	1,184,888
TOTAL - - - - £	13,081,447	342,289	12,689,158	5,753,390	18,442,548
Estimate, 1882-83 - - -	649,100	- -	- -	- -	649,100
Estimate, 1883-84 - - -	978,100	- -	- -	- -	978,100
	14,658,647	342,289	12,689,158	5,753,390	20,069,748
Madras Harbour - - - - -	- - - - -	- - - - -	- - - - -	- - - - -	550,462
Madras Irrigation and Canal Company - - - - -	- - - - -	- - - - -	- - - - -	- - - - -	1,763,500
				TOTAL - - - - £.	22,383,710

SUMMARY OF CAPITAL OUTLAY ON PROTECTIVE WORKS.

Y E A R.		
During 1881-82 - - - - -	- - - - -	135,449
Estimate, 1882-83 - - - - -	- - - - -	271,300
Estimate, 1883-84 - - - - -	- - - - -	343,300
	TOTAL - - - - £.	750,049
	GRAND TOTAL - - - - £.	23,133,759

III.—STATEMENT showing the Direct Annual GAIN or LOSS to the STATE from RAILWAY OUTLAY since 1858.

Y E A R.	GUARANTEED RAILWAYS					STATE RAILWAYS.				EAST INDIAN RAILWAY				TOTAL Loss or Gain to State.
	Capital raised to end of each Year	Capital withdrawn for Expenditure to end of each Year	Net Traffic Receipts, less Monies of Surplus Profits paid to Companies.	Guaranteed Interests.	Loss or Gain to State	Capital Expended.	Net Traffic Receipts	Interest at 4½ per Cent up to end of 1880-81, afterwards* at 4 per Cent.	Loss or Gain to State	Capital Expended	Net Traffic Receipts, less Surplus paid to Shareholders	Interest and Annuity	Loss or Gain to State	
1858-59	£ 22,998,405	£ 19,151,531	£ 232,365	£ 888,411	£ 606,046	-	-	-	-	-	-	-	-	£ 606,046
1859-60	28,573,287	26,322,995	403,057	1,199,929	796,872	-	-	-	-	-	-	-	-	796,872
1860-61	34,397,817	33,901,710	389,413	1,485,745	1,096,382	-	-	-	-	-	-	-	-	1,096,382
1861-62	42,979,539	40,503,922	391,162	1,788,153	1,396,991	-	-	-	-	-	-	-	-	1,396,991
1862-63	46,218,541	46,367,266	625,015	2,166,755	1,541,140	-	-	-	-	-	-	-	-	1,541,140
1863-64	54,932,994	51,122,919	821,548	2,485,182	1,684,634	-	-	-	-	-	-	-	-	1,684,634
1864-65	57,541,917	55,245,159	1,129,851	2,683,787	1,553,936	-	-	-	-	-	-	-	-	1,553,936
1865-66	60,860,247	60,882,025	2,865,574	2,989,241	23,667	-	-	-	-	-	-	-	-	23,667
1866-67	67,258,917	68,179,728	2,347,085	3,031,037	684,002	-	-	-	-	-	-	-	-	684,002
1867-68	76,571,751	75,299,809	1,989,112	3,480,677	1,491,565	594	-	14	14	-	-	-	-	1,491,579
1868-69	82,417,905	79,167,736	2,229,509	3,881,013	1,651,504	552,992	-1,379	12,455	13,834	-	-	-	-	1,665,338
1869-70	86,773,325	83,910,587	2,627,941	4,126,025	1,498,064	734,862	-790	29,180	29,970	-	-	-	-	1,528,054
1870-71	91,426,816	87,686,857	2,536,707	4,341,609	1,784,902	1,193,234	68	43,585	43,517	-	-	-	-	1,828,419
1871-72	93,550,303	90,183,585	2,877,153	4,542,183	1,665,030	1,837,854	-4,063	68,199	72,262	-	-	-	-	1,737,292
1872-73	93,736,915	90,660,830	2,554,485	4,608,418	2,053,933	3,251,503	5,362	114,510	109,148	-	-	-	-	2,163,081
1873-74	94,725,814	91,353,883	3,241,189	4,617,923	1,376,734	5,606,128	-6,474	199,297	205,771	-	-	-	-	1,582,505
1874-75	95,119,118	92,441,794	3,454,848	4,643,901	1,189,053	8,620,308	44,982	320,095	275,119	-	-	-	-	1,464,166
1875-76	95,072,441	93,729,600	3,729,034	4,637,891	908,857	11,785,492	96,027	459,131	363,104	-	-	-	-	1,271,981
1876-77	94,833,129	94,198,059	4,433,151	4,556,281	225,530	14,651,353	86,631	587,525	498,904	-	-	-	-	724,484
1877-78	96,313,173	95,420,309	4,935,790	4,556,285	+ 741,505	18,636,521	127,774	737,479	609,705	-	-	-	-	+ 131,800
1878-79	97,174,046	96,444,666	4,023,589	4,705,191	681,602	21,964,209	231,629	899,874	668,245	-	-	-	-	+ 1,349,847
1879-80	97,959,284	96,794,226	3,974,645	4,716,340	741,895	24,644,702	333,497	1,058,160	724,663	†37,354,248	949,154	34,397	+ 914,757	651,601
1880-81	67,357,116	66,349,320	2,555,069	3,261,951	706,882	28,047,033	661,606	1,204,660	543,054	2,647,479	1,390,542	+1,256,937	+ 7,001	+ 7,001
1881-82	67,466,609	67,021,756	3,282,148	3,271,771	+ 10,377	29,703,708	870,149	1,160,445	290,296	455,262	3,063,693	1,674,781	+1,388,912	+1,108,962
1882-83	68,291,923	67,995,251	3,025,000	3,283,760	260,760	31,851,633	1,035,500	1,241,711	206,211	485,000	2,445,000	1,716,727	+ 728,273	+261,302
1883-84	68,309,336	67,875,483	3,043,900	3,275,280	231,380	31,372,108	1,050,450	1,226,636	176,186	263,200	2,598,050	1,708,900	+ 891,150	+483,584
1883-84	68,909,836	69,103,383	3,054,500	3,301,180	246,680	33,773,108	1,167,700	1,308,024	150,324	424,000	2,718,800	1,710,100	+1,008,700	+611,696
TOTAL	- £ -	-	64,229,440	89,264,609	25,035,169	-	4,655,159	9,429,269	4,774,110	38,915,145	11,977,176	6,516,720	+5,460,456	24,348,823

The decrease in the transactions of the Guaranteed Railways in 1880-81, compared with the year immediately preceding, is due to the removal of the East Indian Railway from the category of Guaranteed Railways.

† This sum is thus arrived at —

(a) Capital of East Indian Railway at time of purchase	26,200,000
(a) 25 per cent premium thereon	6,550,000
Debiture and Debenture Stock	4,450,000
Outlay subsequent to purchase	154,248
TOTAL	£ 37,354,248

(a) Of these amounts, 27,623,386 l will be redeemed by an annuity terminable in 1953, which annuity is entered in the column "Interest and Annuity."

* Except on 1,000,000 l lent by His Highness the Maharajah Holkar for the construction of the Holkar State Railway, on which 4½ per cent. is paid by the State.

The figures in this Statement agree with the Finance and Revenue Accounts. The whole of the Indian Capital transactions of Guaranteed Railways down to the present time, and those of the Revenue and Interest transactions of the Guaranteed Railways down to the year 1878-79, the net Traffic Receipts of the Guaranteed Railways, and the portion of the guaranteed interest paid in India, have been converted into sterling at the contract rates of exchange. All other transactions are converted into sterling on the assumption that 1 l = 10 rupees

DESPATCH to the Government of India, 13 December 1883, No 372 (Financial)

My Lord Marquis,

1. I HAVE considered in Council your Excellency's letter, dated the 24th of September, No 269, replying to my Despatch of the 16th of August, No. 231, regarding your proposals in respect of railway policy in India

2. You speak of the figures contained in the 5th, 6th, and 7th paragraphs of that Despatch, as being "a complete transposition" of those contained in your proposal, but I am unable to see that this term is applicable to those paragraphs, in which, after reciting your own proposals, I summed up the results as showing what would be the total capital outlay on railways which they would involve, how it was intended to provide the capital, how much would have to be borrowed in the market for public works of all kinds, and what would be the total capital outlay on such works.

3. You specially complain of the expression at the close of the 10th paragraph of my Despatch, in which I spoke of your having suggested a "sudden expansion of operations," "involving an annual outlay by Government and private agency of nearly three times the amount of 2½ millions a year at present authorised from borrowed money"

4. I recognise that no sound comparison could be made between a total *outlay* of nearly 7½ millions a year from all sources, as proposed, and a sum of 2,500,000/ annually authorised to be borrowed for State works. It would, no doubt, have been more accurate to have made the comparison between the proposed expenditure and the recent average actual expenditure for the corresponding classes of works, which, as will be shown further on, may be reckoned at about four millions. But, accepting this correction of the statement, the fact remains that a serious sudden expansion of operations had been proposed; and I cannot think that the expression which I used is inapplicable to a scheme which would substitute for a capital outlay of 200,000/ a year an annual expenditure of 2,284,000 /, to the payment of the interest on which capital sum that 200,000 / would be devoted.

5. In the 5th paragraph of your letter you give what you describe as "the annual amount now applicable to the purposes" comprised in your proposals as 6,556,600 / . This sum includes the amount which you proposed to raise by means of a limited guarantee, the charge for interest being met from a portion of the Famine Insurance Grant, which, considering that the sanction of the Home Government has been repeatedly refused to its application for this purpose, cannot be regarded as "now applicable" (to use the words of your Excellency's letter) to meet such a charge. The sum referred to also includes the capital which the Oude and Rohilcund Railway Company have been recently authorised to raise for the extension of their line, an extension which formed part of the proposals classed under the head (c) in your Letter of the 23rd of January last, No 29, and the amount must therefore be included in the total cost involved in your general scheme. It further includes the capital required for the Bhagwangola Line, which, though the funds are not to be charged on the Famine Insurance Grant, is, in other respects, to be treated as that raised by the limited guarantee companies to which I have already referred. Moreover, it includes the whole amount of the Famine Insurance Grant and the savings of the provincial balances, which, though properly applicable to such purposes in years of prosperity, cannot, with a due regard to the financial condition of the country, be hypothecated in advance for railway construction, and thereby removed from the control of the Government, which, in the event of a famine, would have in the first instance to look to these resources, before borrowing or imposing additional taxation to meet the emergency

6. Besides these amounts, which I am unable to admit as available, in the sense in which that word is used by your Excellency, for your proposed general scheme for the extension of railways, your table erroneously includes the estimated outlay on the East Indian and Guaranteed Lines among the "annual resources at present." I am, however, disposed to agree with the suggestion made in the 10th paragraph of your letter, that the clearest way of viewing the effect of your proposals for the extension of railways, is to eliminate from the calculation the outlay contemplated on works of irrigation and navigation, and on lines of railway already open.

7. The total resources at your disposal for productive public works, subject to the
061. 4 C remarks

remarks in the foregoing paragraphs, may be taken as follows, at the time when your letter of the 23rd of January was written —

Annual loan - - - - -	£	2,500,000
East Indian Railway - - - - -		300,000
Guaranteed Railways - - - - -		300,000
Famine Insurance Grant - - - - -		750,000
Provincial Balances - - - - -		170,000
		4,020,000
Deducting the sum of - - - - -		1,850,000
stated by you to be needed for irrigation and navigation works and open railways, the remainder available for new lines is - - - - -	£.	2,170,000

As you reckon the capital outlay on new lines under your own proposals, after eliminating that needed for works of irrigation and navigation and open railways, at 5,516,400*l* a year for five years, the recommendations of your Excellency involve an increase to rather more than two and-a-half times the expenditure at present permitted, instead of nearly three times, as stated in my former Despatch

8 So far, therefore, as concerns the general financial scope of your proposals, I retain the opinions expressed in my Despatch of the 16th of August last

9 I think it unnecessary at the present moment to discuss the various important matters referred to in the latter part of your letter, since, as I have already* informed your Excellency, it is the intention of Her Majesty's Government to refer to the consideration of a Select Committee of the House of Commons the question of the extension of railway communication in India, with especial reference to the recommendations of the Famine Commission regarding protective lines.

10. I informed your Excellency in my Despatch of the 25th of October, No. 131 (Railway), that I was unable at present to entertain the proposals for the construction of a line from Bhopal to Cawnpore and Gwalior, and I must now add that, pending the result of the inquiry, I am not prepared to consider arrangements with any private company for constructing the line from Nagpore to Calcutta.

I have, &c.
(signed) Kimberley.

No. 8.

LETTER from the Government of India, 29 January 1884, No. 27 (Financial).

My Lord,

We have had the honour to receive your Lordship's Despatch, No. 372, dated the 13th December last, on the subject of our proposals in respect of railway policy in India

2 Those proposals were described in paragraph 10 of your Lordship's Despatch, No. 231, of 16th August 1863, as a "sudden expansion of operations," involving an annual outlay by Government and private agency of nearly three times the amount of 2½ millions a year at present authorised from borrowed money

To this description we demurred in our reply, No 269, of 24th September last, and we showed that the increase we contemplated was only 799,800*l* per annum, or 16.9 per cent over the present system, and that only 350,000*l*. out of this amount involved any permanent liability

Your Lordship now modifies the description so far as to substitute "rather more than two-and-a-half times," for "nearly three times," but is of opinion that "the fact remains that a serious sudden expansion of operations had been proposed"

3 The cause of these broadly divergent views lies in differences as to the standard of comparison, namely, "the annual amount now applicable to the purposes" comprised in our proposals.

4 In reviewing the items which were set forth in the 5th paragraph of our letter as comprising this amount, your Lordship observes that the savings of provincial balances cannot be "hypothecated in advance" for railway construction, inasmuch as the Government must look in the first instance to these resources in the event of famine We would point

* Despatch to India, 16th August 1863, No 231 (Financial)

point out that the 170,000*l* per annum, which we have entered among items now applicable, is not a hypothecation in advance of funds which may never accrue, but consists of balances already realised, and available without trenching on the minimum cash balances which Provincial Governments should keep, the amounts of which have lately been fixed in the correspondence quoted marginally, and only two-thirds of which, moreover, are liable, under paragraph 8 of our Financial Resolution, No 3353, dated 30th September 1881, to depletion in case of famine.

Government of India's No 233, dated 24th August 1883, paragraphs 64-5
Secretary of State's reply, No 348, dated 22nd Nov. 1883, paragraph 21.

In your Lordship's 6th paragraph it is stated that the estimated outlay on the East Indian and guaranteed lines has been "erroneously" included among "annual resources "at present" As this expenditure is now, and long has been recognised and provided for, under your Lordship's sanction, from loan funds and independently of the 2½ millions we do not understand wherein our error lies, or that the insertion of the item in both of the amounts compared has in any way prejudiced their comparison.

To these two items, however, we need not allude further, as we gather from the inclusion of the former in your Lordship's 7th paragraph that the objection to it has been waived, and as the latter will be eliminated from the discussion along with outlay on irrigation and navigation, in accordance with our suggestion, of which your Lordship approves.

5 The items in dispute are thus reduced to three, making up the difference between 4,716,600*l* which we hold, as stated in paragraph 10 of our letter of the 24th September last, to be now applicable to the purposes which our proposals comprise, and 2,170,600*l* which alone your Lordship, in paragraph 7, reckons as being so. These items are —

- (a) £. 162,000 for the Bhagwangola line,
- (b) 300,000 for the Oudh and Rohilkhand Railway extension,
- (c) 2,084,000, being the difference between 2,284,000*l*, which is the annual share of the capital cost of certain protective railways proposed, and 200,000*l* per annum, which was estimated in paragraphs 35 and 44 of our Despatch of 23rd January 1883, as the maximum annual interest-charge to fall on the Famine Grant by raising 11,420,000*l* on the security of it.

£. 2,546,000

We proceed to notice these items in succession.

6. The Bhagwangola line and the Oudh and Rohilkhand extension were included in our Schedule A, because they involved a future financial liability for which we expected to be called on to provide, and could not have been omitted without vitiating our whole calculations, which included even irrigation, navigation, and open lines. At the same time we consider that we were entitled to include their cost among "amounts now applicable" for the purpose of any comparison between the *status quo* and the new policy we ourselves proposed to adopt, inasmuch as they were already sanctioned by your Lordship and partly under construction, and the liability could not have been avoided even if we had made no policy proposals at all. If, however, it is preferred to omit them, they must obviously be omitted from both totals compared. Our proposals will thus become 5,054,400*l*, our "amount now applicable," 4,254,600*l*, our contemplated increase 799,800*l* as before, but now 18 8 per cent., and the only difference remaining will be that of 2,084,000*l*, which we are about to notice.

7 To our reckoning of a sum arrived at by capitalisation of a portion of the Famine Grant, two objections are taken, administrative and financial.

8 Administratively, it is stated that the grant, though properly applicable to railway construction in years of prosperity, cannot, by hypothecation in advance, be removed from the control of the Government, which must look to it in the first instance in the event of famine, before borrowing or imposing additional taxation to meet the emergency. This objection we consider to have been fully answered, by anticipation, in paragraph 43 of our Despatch, No 29, of 23rd January 1883, to which we beg to invite your Lordship's attention. Virtually, the grant would be just as available in time of famine as now is, notwithstanding any such hypothecation.

9 Financially, it is objected that the capitalised sum representing a portion of the Famine Grant cannot be termed "now applicable," because (1) Your Lordship has on a previous occasion refused* to sanction such capitalisation, and (2) a capitalised sum must be regarded as an increase of annual outlay.

As to the first objection, we would explain that we have used the term "now applicable" in the sense that the money is now forthcoming without incurring any new liability, and might be applied to capitalisation if the sanction of your Lordship, which we solicited, were given. Thus may be clearer by reference to the case of the balances,

* The Despatch says "repeatedly," but we are not aware of more than one instance, which occurred in 1881.

balances, which we described in our 3rd paragraph as not only "now available" but also, "allowed to be devoted to the purpose"

As to the second objection, we submit that a capitalised sum is financially the equivalent of its corresponding annual charge. The test of increased outlay we take to be increased financial liability or burden, and in this case there is none whatever. By the appropriation of 200,000 *l* per annum to the temporary guarantee of a capital sum, the State would be neither richer nor poorer, and we submit that the process cannot be either fairly or accurately described as an increase of expenditure.

8 For the reasons stated in the preceding paragraphs, therefore, we are obliged to hold that between the five millions annually* which our proposals involve, and the 2,170,600 *l* mentioned in your Lordship's 7th paragraph, there can be no ratio or comparison whatever, and that the increase which we contemplated is not more than 18.8 per cent. above the amount now applicable to the purposes we have in view

II.

9 We will now turn to the question of the important inquiry to be made by a Select Committee of the House of Commons

Considering that 12 months have elapsed since our proposals for Railway extension were laid before your Lordship, during which time a year's expenditure on the present system has taken place, and further information regarding proposed lines of railway has in some cases been obtained, we think it desirable, and it will probably be convenient to the Select Committee that we should re-state our proposals, revised financially up to date, in the clearest and briefest manner possible

10. Our new policy may thus be stated as—

First.—To construct first the railways most urgently needed for famine protection, or other urgent cause leaving those less urgent to wait, or to be prosecuted by private enterprise without State grants or guarantees. All railways proposed or in hand were accordingly divided into two Schedules, A and B.

Second.—To use indiscriminately, for railways in Schedule A, the resources of ordinary revenue and "loan funds,"† thus removing the present difficulty that famine lines not likely to be "productive" (i. e., to pay 4 per cent in five years), and which private enterprise will consequently not undertake, cannot be made at all, because "ordinary" revenues (including 500,000 *l*. out of the Famine Grant) are insufficient for them

Third.—To make full use of the agency of both the State and private companies, in prosecuting railway construction

Fourth.—To provide the funds necessary for executing all the railways in Schedule A within a certain time, by—

(a) increasing the annual loan from 1,800,000 *l* to 2,150,000 *l*, i. e., by 350,000 *l*. ‡

(b) utilising certain Provincial balances, amounting to 853,000 *l*,

(c) paying interest from "ordinary" revenues on a certain sum to be raised by "construction and working" companies,§ and "limited guarantee" companies, ||

(d) paying interest out of the Famine Insurance Grant on a certain sum to be raised by "limited guarantee" companies.

The above will perhaps be more fully understood by a study of the Schedules

11. We append copies of Schedules A and B, which have been revised in view of expenditure during the past year, of additional information obtained by further surveys and

* As reduced in paragraph 6

† This term means money on which interest at 4 per cent is charged to the railways. Whether it is actually borrowed in the open market, or provided out of the debt repayment portion of the Famine Insurance Grant, or drawn from cash balances, is a matter of ways and means only

‡ The sum now borrowed annually, in accordance with the recommendation of a Select Committee of the House of Commons in 1873, is 2,500,000 *l*, of which 1,800,000 *l* are ordinarily applied to railways, and 700,000 *l* to irrigation. The sum to be borrowed in future would thus become 2,550,000 *l*

§ A "construction and working" company is a company, such as the Southern Mahratta Railway Company, which borrows money, under a State guarantee of a low rate of interest, to make a railway which is the property of the State. The State liability for interest is permanent, and the line may be taken over by the State at the option of either party

|| A "limited guarantee" company is a company, like the Bengal Central Railway Company, to which the State advances interest during a limited term of years, to be repaid whenever the profits of the line exceed a certain rate. The State liability for interest is temporary.

13 The fourth head comprises the three railways, 1,364 miles in length, and estimated at 11,250,000 L., which we proposed, in paragraphs 34 to 43 of our Despatch, No. 29, of 23rd January 1883, to construct by the agency of limited guarantee companies, paying the interest out of the Famine Insurance Grant. Your Lordship expressed, in paragraph 11 of the Despatch, No. 231, of 16th of August last, the opinion that many of the lines described in the Schedule, and that two of these three in particular would not have been deemed by the Famine Commissioners "to be protective in the strict sense of the word," and that consequently the application of the Famine Insurance Grant to them was inadmissible. In paragraphs 14 to 17 of our Despatch, No. 269, of 24th September last, we offered some arguments in support of our proposal. The matter seemed to us, however, too important to be left dependent on extraneous interpretations of a possibly somewhat obscure passage in the Commissioners' Report, so we referred it to the four members of the Commission,* who are at present in India. We published copies of their minutes, from which it will be seen that they unanimously state their meaning to have been in accordance with the standard of a protective line which we have adopted. We also forward a representation from the Bombay Chamber of Commerce regarding these three lines.

Honourable H S Cunningham
Honourable H E Sullivan.
Honourable J B Pele.
C. A. Elliot, Esq.

14 The revised Schedule A, now forwarded, unavoidably differs somewhat from that drawn up last year. During the period intervening between the closing dates of the two about 2½ millions will have been spent, and certain sections of line will have been opened, estimates on final surveys have in some cases taken the place of estimates based on reconnaissances, while the arrangements for junctions with the Nizam's Extension Railway, and the inspection of the country between Kaunia and Dhubri, reported in paragraphs 8 to 11 of our Despatch, No. 27 (Railway), of 26th May 1883, which were un contemplated when the first

	Miles	—
1 Hindurpur extension of Bellary-Kistna Railway	178	700,000
2 Kadiri extension of Cuddapah Nellore Railway	130	850,000
3 Damacherla-Vellore Railway	140	840,000
4 Minor Pannia lines in Madras	150	9,00,000
TOTAL	598	3,290,000

Schedule was framed, will necessarily produce some additional outlay. The principal cause of increase, however, is the insertion of the additional metre gauge lines in the Madras Presidency, which are specified in the margin. In a Despatch, No. 121 R., of 7th September 1882, your Lordship suggested that early attention was probably needed to the requirements of those districts of Madras which suffered so severely from famine in 1875-76, while in Despatches, Nos. 120 and 143, of 4th October and 5th November 1883, opinions understood to be favourable to the Hindurpur and Kadiri extensions were expressed. Our honourable colleague, Mr Hope, spent the month of November in a tour through Southern India, during which he visited 11 headquarters and four sub-divisional stations, conferring, as to the wants of the Presidency, with a large number of local officers, and also at Madras itself, with the Board of Revenue and his Excellency the Governor in Council. The result has been the insertion of the three specific railways named above, together with a provision, by way of reserve, to carry out on the metre gauge a certain portion of the light lines referred to in your Lordship's Despatch, No. 122 (Railway), of 11th October 1883, which it will probably be desirable to make from Imperial Funds, with or without a provincial guarantee, as may be determined hereafter, when the projects have been matured. For a more detailed explanation of increases and decreases, we beg to refer to the statement appended.

15 One important feature in the consideration of our policy will no doubt be that of the returns which the proposed railways are likely to yield. We have already, in a resolution, dated 27th June 1883, and forwarded to your Lordship with Despatch, No. 30, P W., dated 30th idem,

	On Outlay, excluding Premium on Purchase of East Indian Railway	On Outlay, including Premium on Purchase of East Indian Railway
On total capital outlay	5 50	5 24
On ditto, deducting surplus profits, amounting to 733 7451, paid to Companies, and contributions to Provident Fund	4 98	4 72
On ditto, plus net advances of interest in past years	4 40	4 38
On ditto ditto, and also deducting profits and contributions as above	4 05	3 90

shown the results of the preceding 11 years of our railway administration. We now enclose a further resolution, No. 5, R A., dated the 4th instant, which shows that the net revenue of all the State and Guaranteed Railways

	Percentage of Net Earnings to Capital Outlay in the Calendar Year 1882.
Rajputana-Malwa	8.46
Patna-Gya	6.93
Northern Bengal	5.45
Magpore-Chattisgarh	7.15
Bhowanipore-Gondal	2.75
Rangoon Irrawaddy	4.28
Indus Valley	4.50

yields the per-centages, specified marginally, according to the various items taken into the calculation. These results, according to even the most unfavourable method, cannot be deemed other than satisfactory. It is noteworthy that, of the State railways, some of the more recent pay the best.* As regards the new lines now proposed, we would point out that, as shown above in paragraph 12, only a little more than one-third of the capital outlay will be on lines of a simply protective character. No less than 18 out of the 28 millions of total outlay will go to lines which are

all technically productive, and some of them expected to be very highly so

16 Another question, which will of course be considered, is, whether the liabilities proposed may be undertaken with financial prudence

The gross amount of these liabilities, permanent and temporary, will at its maximum be 1,111,360*l* per annum, which is 4 per cent. on the 27,784,000*l*, shown in paragraph 11, as the net amount to be raised

As regards 450,000*l* of this, which is the interest of the 11,250,000*l* to be raised on limited guarantee for the three great protective-productive lines, it has been shown, in paragraph 35 of our Despatch, No 29, of 28th January 1883, that the net temporary liability, allowing for receipts which may in this case be very safely calculated on, will not exceed 200,000*l* per annum, on an average, during the first five years, after which it should decrease rapidly until repayment begins. This liability we proposed, in paragraphs 36 to 44 of the same Despatch, to charge to the Famine Insurance Grant. It will, therefore, cause no new financial burden whatever.

The remainder, viz., a maximum of 661,360*l* gross, has now to be dealt with. We append a copy of the Appendix II. to the Despatch already quoted, revised in harmony with the revised Schedule A now submitted. This shows results analogous to those in

	Gross Interest Charge.	Net Revenue.	Net Interest Charge.
1864-65	£ 122,373	£ 70,800	£ 51,573
1865-66	264,644	123,000	141,644
1866-67	308,816	211,000	97,816
1867-68	529,938	308,000	221,938
1868-69	661,360	430,500	230,860

paragraph 46 of the same Despatch, which may be combined with the gross charges for interest likely to be incurred in each year, as construction proceeds, in the manner shown in the margin. The net interest charge will thus at no time exceed 251,000*l*. The rapid growth of all railway receipts is

explained in paragraphs 47 to 54 of the Despatch, which we may now revise by stating that the net profit in 1882-83 was actually 531,786*l* instead of 261,000*l* as therein estimated, and that the six months' estimate for 1883-84 is 1,077,000*l*, which itself will probably be exceeded. In view of this increase we do not see any ground for doubt that the net interest from year to year above detailed cannot be met out of the growing receipts of the railways we already possess. If, however, any extraordinary circumstances should defeat this expectation, and other resources should likewise fail simultaneously, it would be justifiable to impose on the Famine Grant, as a further charge, the interest on the 10,174,000*l* expended on railways, protective only (*supra*, paragraph 12), which might amount to about 406,690*l* per annum, in the improbable event of the outlay yielding no return.

On the whole, therefore, we consider that the proposed liability may be incurred with perfect safety, doubly secured as it will be by the general railway receipts, and by the reserve, as regards protective lines, of the Famine Insurance Grant.

17 There is, however, a further aspect of the matter which should not be overlooked, namely, that if the system of debit to capital of interest during construction, and transfer of the guarantee to a period commencing on the date of opening, should be adopted in the case of any railways made by the agency of companies, as we have more than once suggested,* the annual burden would be *pro tanto* lightened or deferred until the growing receipts from the new State railways, constructed in the interval, rendered it more easy to bear.

* Despatch, No 132 (Railway) of August 18, 1883, paragraph 37
 " No 140 (Railway) September 8, " " 8.
 " No 269 (Financial) " 24, " " 17.

18 In this connection, we would draw attention to the present system of providing out of the normal loan, the capital required for open State railways. The effect of this system is that the better our open lines succeed, that is, the more extra-engines, wagons, sidings, goods sheds, &c they need, to meet the requirements of growing traffic, the less is the balance of the loan available for construction of new railways. Thus, the object of the normal loan, which was stated by the Parliamentary Committee of 1879 (Report, p. xxi) to be the construction of new public works, will be gradually frustrated, and the period within which the railways we propose can be constructed will be prolonged. The question is rapidly becoming a serious one. It will be seen from paragraph 11 of this Despatch that the demand under this head is estimated at 1,500,000*l*, or 300,000*l* per annum on an average, but if our export trade should expand, as it well may, beyond present calculations, this amount must be exceeded.

If, however, this amount were to be borrowed outside the normal loan, as the similar capital required for the East Indian Railway and the Guaranteed Railways now is, the result would be to set free 1½ millions, if not more, for increased construction of new lines. We desire to call the especial attention of your Lordship and the Select Committee of the House of Commons to this suggestion.

III.

19 The above remarks may be read in connection with paragraph 13 of our Despatch, No 269 (Financial), dated the 24th September last, in which we observed that our proposals for railway extension appeared to be open to a charge of insufficiency rather than of excess.

We think it not improbable that this view will be held in some quarters, and may be urged before the Select Committee of the House of Commons. Indeed, we have already received, since the date of our proposals of 23rd January 1883, two suggestions in this

sense from the Chambers of Commerce of Madras and Bombay, to which we shall presently allude. We therefore propose to submit a brief summary of various suggestions for a more rapid extension of railways which have been laid before us, but without expressing on this occasion any opinion on them.

20 Such an extension, it may be premised, practically means that all, or a considerable proportion, of the railways in Schedule B, which comprises 3,422½ miles of line estimated at 24,288,000 *l.*, should be taken up at once in addition to those in Schedule A. We need scarcely say that in the abstract, and if such a course could be shown to be financially practicable, we should be extremely glad to see many of the lines in Schedule B started.

	Miles.	Estimates.
1 Benares-Puri, with branch to Gya	694	5,949,000
2 Chitlagong Chandpur Cachar	303½	2,488,000
3 Cachar-Dibrugarh, with branch to Gauhati	483	3,979,000
TOTAL	1,380½	12,416,000

A few of the most important are specified in the margin, and besides them there are various short feeders which would be useful in opening up the country. All the above would be profitable undertakings to whoever embarked in them; at the same time, none of them, except the lower section

of the Benares-Puri project, possess protective importance, and none can claim precedence in State aid over the railways which, for one reason or another, have been inserted in Schedule A.

21 One suggestion by which railways might be more rapidly extended has been made by the Madras Chamber of Commerce, and supported by that of Bombay, in their letters of the 19th October and 5th December last, of which copies are appended. It is to the effect that the Famine Insurance Grant should be applied, to whatever extent may be necessary, in paying interest on loans for public works, adequate to the growing wants of the country, or preventive of famine.

This principle we have already adopted to the limited extent of 200,000 *l.* per annum in our proposals of 23rd January 1883, but supposing a much larger capitalization to be contemplated, upon which point we are not at present prepared to express any opinion, the principle might be applied to the raising of the whole capital necessary for such railways in Schedule A, as are of a *bona fide* protective character, viz., 25,704,909 *l.*, as already shown in sub-heads (4) and (5) of paragraph 12, and even to the portion of the Benares-Puri project alluded to above. The maximum annual charge on the grant for such railways included in Schedule A would thus be 1,028,196 *l.* at 4 per cent, but the average annual charge would probably not exceed 390,000 *l.*, adopting the ratio of the calculation in clause 3 of paragraph 16 of this Despatch. This charge might be temporary only, to whatever extent the adoption of the "limited guarantee" principle was thought desirable. The effect of thus charging the Famine Insurance Grant would be to set free proportionately the ordinary annual loan for railways.

22 A second suggestion, also made by the Bombay Chamber of Commerce, in their letter above alluded to, is the application "in whole or in part, of the two and a-half millions sterling, which the Government now provide annually, as a fund with which to raise the capital required to construct State Railways on a large and comprehensive scale within the next few years." We understand this to mean, in other words, that the Government should apply to its own State Railways the principle of debiting interest during construction to capital.

The Bombay Chamber of Commerce do not explain how they would meet the interest on capital outlay after the date of opening. This would, for instance, amount to 496,400 *l.* per annum, gross, exclusive of interest on the accumulated interest added to capital, if the important projects in Schedule B, shown in paragraph 19 as amounting to 12,416,000 *l.*, were taken up. It may be admitted that the net charge would never touch this, and would gradually fall off, as the railways would begin to earn something at once.

23 We reserve for the present all expression of our opinion on the merits of these two proposals, which involve various important issues, such as the comparative advantages of sterling and rupee loans, and the relative merits, especially from a famine point of view, of State and private agency in railway construction.

24 Our Honourable Colleague, Mr. Hope, desires to point out that additional resources for railway extension would be obtained, in a different way, by the adoption of the proposal to place the Imperial Public Works administration upon a contract basis analogous to that of the quinquennial agreements with Provincial Governments, which is put forward in his Minute which accompanied our Despatch, No. 29, of 23rd January 1883. Mr. Hope considers that the profits of Indian railways, which have only since 1880-81 become an item of regular revenue, should not, for a few years, be swallowed up in the general expenditure of the Empire, but should be devoted in one form or another to that railway extension which the country so urgently needs for its protection from famine, the development of its external commerce, the counteraction of the fall of silver, and the general enrichment of its people. In short he would let railways breed railways. The taxpayer, instead of immediately taking direct possession of these profits, in order to lighten present burdens or to gratify new wants, would receive the advantage of them in the form of increased facilities for locomotion and trade, increased exports, lightened exchange, improvement in land revenue, and other obvious results, thus emulating the self-denial

self-denial of the American people, who, for so many years, continued their heavy war taxation in order to reduce their national debt.

For this proposal it is claimed that, in addition to minor technical advantages, it would promote thrift in expenditure, furnish a stimulus to increasing receipts, as similar contracts in the case of Provincial Governments have been found by experience to do, and also provide a means of railway extension sufficiently rapid, but under the strict security for financial soundness, which the contract limit would entail. In the event of the assignment of the whole of the receipts being deemed impossible, that of one third of them is suggested.

We have already expressed, in paragraph 74 of that Despatch, our dissent from our Honourable Colleague's proposal.

25 We cannot conclude this Despatch without inviting the attention of your Lordship and the Select Committee of the House of Commons to the appeal and warning contained in our communications specified marginally as to the imperative necessity of pushing forward all protective railways, and especially the three to which we have referred above in paragraph 13, without delay and before another famine is upon us. The effects of famine are possibly not fully realised except by those who are familiar with them. Such illustration of them as statistics can afford will be found in a statement which we append, containing facts brought to our notice in connection with the proposed extension of the Bellary-Kistna Railway from Gundacul to Hindupur, across the Anantapur District. It will be seen that this district, which in 1876-78 was a portion of that of Bellary and was severely stricken by famine, suffered a loss of population which may be gauged by the fact that the numbers were found by the census of 1881 to be 19 per cent below those of that of 1871, and 29 per cent below what they might have been expected to attain at a normal rate of increase. The case of Anantapur is no isolated one, but simply that, to a rather greater or less degree, of all districts where real famine occurs, as experience has amply shown in Madras, Mysore, Bombay, Rajputana, the North-West Provinces, and Orissa. Independently of all feelings connected with the loss of human life, as such, it is worth while to consider the economic effects of such depopulation, coupled as it was with a vast loss of cattle, and to endeavour to estimate how much money it would be worth while for the State and the people to pay in order to avert or even to mitigate such a calamity in the future.

We have felt it our duty again to insist strongly on this aspect of the question of railway extension, in order that, in the event of our finding ourselves overtaken by the catastrophe of another famine, we may at least rest assured that we have used every means in our power to minimise its effects.

We have, &c.
(signed)

It upon.
J. Gibbs.
T. F. Wilson.
C. P. Ilbert.
S. C. Bayley.
T. C. Hope.
A. Colvin.

No. 29, dated 23rd January 1883.
paragraph 14.
No. 265, dated 24th September
1883, paragraph 2.

SCHEDULE (A) REVISED

RAILWAYS indispensable for PROTECTIVE or other URGENT PURPOSES, to be completed or made by the State, or other Agency on its behalf.

DESIGNATION OF RAILWAY.	Gauge	Length in Miles	Cost in Conventional Sterling	Outlay to end of 1882-83.	Probable Outlay, 1883-84	Balance needed to complete at end of 1883-84	Class of Project.	REMARKS <i>N B</i> —For Particulars of the several Projects, see the original Schedule of 1883
(a) Capital to be Raised and Interest Paid by Government of India								
			£		£.	£.		
Wazirabad-Sialkot - - - -	Broad	26½	95,000	-	75,000	20,000	Productive	Line opened.
Rewari - Hissar - Ferozepore, with Branch to Fazilka	Metre	302	1,413,400	861,192	678,600	483,608	Protective	89 miles open, 61 more to be opened shortly
Jhansi-Manickpur - - - -	Broad	180	1,700,000	8,622	148,000	1,548,378	- ditto	Under construction.
Vizagapatam Raipur - - - -	Metre	350	2,900,000	-	-	2,900,000	- ditto.	
Bellary-Kistna - - - -	Ditto	255	1,775,000	2,096	152,560	1,620,404	- ditto	Under construction.
Ditto - Hindupur Extension*	Ditto	115	700,000	-	-	700,000	- ditto	
Cuddapah Nellore - - - -	Ditto	66	366,400	-	30,000	336,400	- ditto	Under construction
Ditto - Kadiri Extension*	Ditto	180	850,000	-	-	850,000	- ditto	
Damacherla-Vellore-Arni-Villupuram*	Ditto	140	840,000	-	-	840,000	- ditto	
Minor Famine Lines in Madras*	Ditto	160	900,000	-	-	900,000	- ditto.	
Bezwada to Nizam's Frontier - - - -	Broad	32	256	-	-	256,000	Productive	} <i>Vide</i> Despatch, No 45, Political, dated 30th April 1883
Warora Chanda - - - -	Ditto	35	350,000	-	-	350,000	- ditto	
Prome Allenmyo - - - -	Metre	42	375,000	-	-	375,000	Military and Productive	
Total MILEAGE and COST - - - -	-	1,822½	12,520,800	861,910	984,100	11,174,790		
<i>Deduct</i> ,-								
Mileage to be opened and Amount spent to end of 1883-84 - - - -	-	175½	1,346,010	-	-	-		
Remainder for subsequent Years - - - -	-	1,647	11,174,790	-	-	-		

(b) Capital to be Raised by Government of India, Interest Paid by Provincial Governments.

0 3 1

Amritsar-Pathankot - - - - -	Broad	65	600,000	309,924	260,500	129,576	Military and Productive	51 miles open	
Bareilly-Philibhit - - - - -	Ditto	82½	175,000	21,167	90,200	68,638	Productive	Under construction	
Dacca-Mymensingh - - - - -	Ditto	85	600,000	47,815	222,800	329,885	- ditto	- - ditto.	
Assam-Bihar Railway.									
1. Mozufferpore-Hajipur - - - - -	Metre	84	220,000	5,881	100,000	114,119	Protective and Productive.	- - ditto.	
2. Sonapore-Hajipur - - - - -	Ditto	2½	142,000	-	-	142,000	- ditto.		
3. Jhajarpur-Dinajpur - - - - -	Ditto	-	-	-	100,000	1,865,000	- ditto.		
4. Munihari Branch - - - - -	Ditto	208½	1,465,000	-	-	-	- ditto.		
5. Kaunia-Dhubri - - - - -	Ditto	54	560,000	-	-	500,000	- ditto.		
Rangoon-Tongoo (Sittang Valley) - - - - -	Ditto	168	1,170,000	589,508	385,000	195,497	Military and Productive.	Under construction.	
Total MILEAGE and Cost - - - - -	-	942½	4,982,000	874,200	1,158,500	2,899,210			
<i>Deduct.—</i>									
Mileage to be opened and Amount spent to end of 1888-84 - - - - -	-	148	2,082,790	-	-	-			
Remainder for subsequent Years - - - - -	-	499½	2,899,210	-	-	-			

4 2 2

(c) Capital to be Raised by "Construction and Working" Companies; Interest to be Paid by Government of India.

Bankapur-Harihar - - - - -	Metre	50	800,000	-	-	300,000	Protective and Productive	
Western Deccan - - - - -	Ditto	242½	1,800,000	-	-	1,800,000	- ditto.	
TOTAL - - - - -	-	292½	2,100,000	-	-	2,100,000		

(d) Capital Payable from Provincial Balances; no Interest Charge.

Farukhabad-Hathras, including Kashgunj - Soron Branch	Metre	111	561,000	192,550	320,000	48,450	Productive	Will probably be opened before 31st March. Under construction.	
Bridge over the Jumna at Muttra - - - - -	Ditto	1							
Total MILEAGE and Cost - - - - -	-	112	561,000	192,550	320,000	48,450			
<i>Deduct.—</i>									
Mileage to be opened and Amount spent to end of 1888-84 - - - - -	-	111	512,550	-	-	-			
Remainder for subsequent Years - - - - -	-	1	48,450	-	-	-		This is for the Jumna Bridge on the Aohneyra-Cawnpore State Railway and completing sundry works.	

* These lines are roughly estimated for on a mileage rate

RAILWAYS indispensable for Protective or other Urgent Purposes, to be completed or made by the State, or other Agency on its behalf—*continued*

DESIGNATION OF RAILWAY	Gauge.	Length in Miles	Cost in Conventional Sterling	Outlay to end of 1882-83	Probable Outlay, 1883-84,	Balance needed to complete at end of 1883-84	Class of Project	REMARKS. <i>N B</i> —For Particulars of the several Projects, see the original Schedule of 1888
(e) Capital to be Raised by Private Companies, under "Limited Guarantee" System								
Ransghat Santopore-Bhagwangola - -	Broad -	92	£ 810,000	£ 1,250	£ 18,750	£ 790,000	Productive -	This line is now in abeyance, as the Bengal Central Company cannot undertake it at present. A recovery of 680,000 l is anticipated by the sale of the Nagpur Chhattisgarh Railway to the Company.
Bhopal-Jhansi-Gwahar and Jhansi Cawnpore	Ditto -	385	3,500,000	-	-	3,500,000	Protective and Prouactive	
Barakur-Nagpur - - - - -	Ditto -	637	5,300,000	-	-	5,300,000	- ditto -	
Bilaspur Etawah - - - - -	Ditto -	352	2,450,000	-	-	2,450,000	- ditto.	
Total MILEAGE and Cost - - -	- -	1,456	12,060,000	1,250	18,750	12,040,000		
GRAND TOTAL MILEAGE and Cost	- -	4,325½	32,173,800	1,480,000	2,481,350	28,262,450		
<i>Deduct,—</i>								
Mileage to be opened and Amount spent to end of 1883-84 - - - - -	- -	429½	8,011,350	—	—	—		
Remainder for subsequent Years - - -	- -	3,896	28,262,450	—	—	—		

A B S T R A C T.

Capital to be borrowed by Government of India (a) and (b), less recovery under (e) - - -	£ 13,444,000	
" " " Companies on behalf of Government of India (c) - - -	2,100,000	15,544,000
" " " " on their own account (e) - - - - -	-	12,040,000
" " provided from Provincial balances (d) - - - - -	-	48,410
TOTAL - - - £		27,632,450

M E M O R A N D U M.

	£
Amount to be borrowed by Government of India as shown in Abstract - -	18,444,000
Additional for surplus and working stores on projected Railways - - -	700,000
Additional capital required on open State Railways - - - -	1,500,000
TOTAL - - - £	15,344,000
<i>Less,—</i>	£
To be provided out of revenue, under 33—Famine Relief - -	1,500,000
Further contributions from Provincial Balances - - -	500,000
	2,000,000
Net amount to be borrowed for State Railways by the Government of India -	13,344,000
<i>Add,—</i>	
To be borrowed by "Construction and Working" Companies (c) - - -	2,100,000
TOTAL to be Borrowed by or on behalf of } Government of India - - - }	15,744,000
<i>Add,—</i>	
To be borrowed by Companies on their own account under (c) - - -	12,040,000
GRAND TOTAL to be Borrowed - - - £	27,784,000
<i>Add,—</i>	
To be provided from Provincial Balances for State Lines under construction -	48,000
GRAND TOTAL - - - £	27,832,000

SCHEDULE B. REVISED

RAILWAYS to be left to PRIVATE ENTERPRISE

PROVINCE AND DESIGNATION OF RAILWAY	Gauge	Length in Miles	Estimated Cost in Conventional Sterling	Class of Project.	REMARKS <i>N B</i> —For particulars of the various projects, see the original Schedule of 1883
<i>Punjab.</i>			<i>£</i>		
Rawalpindi to Murree - - - - -	2 ft. 6 ins - -	46	250,000	Productive,	
Loodhiana to Ferozepore - - - - -	Broad - - -	80½	485,000	Military and productive.	
Fazilka-Okara - - - - -	Ditto - - -	40	200,000	Productive	
Khanpur-Mithankot - - - - -	Ditto - - -	21	126,000	- ditto	
Bhera Daryakhan - - - - -	Metre - - -	180	450,000	Military and productive	
Ambala-Kalka - - - - -	Broad - - -	40	300,000	- - ditto	
Jullundur-Hoshiarpore - - - - -	Ditto - - -	26	156,000	- - ditto.	
<i>North-West Provinces and Oudh</i>					
Moradabad-Ramnagar - - - - -	Broad - - -	49	400,000	Military and productive.	
Hurdwar-Dehra-Rajpore - - - - -	Metre - - -	40	220,000	- - ditto.	
Puranpur-Kheri-Sitapur-Lucknow - - - - -	Ditto - - -	173	650,000	Protective and productive.	
Lucknow-Rai Bareilly-Pertabgurh-Jaunpur - - - - -	Ditto - - -	148	500,000	- - ditto	
<i>Central India and Central Provinces</i>					
Jubbulpore Gondia - - - - -	Metre - - -	135	1,070,000	Productive,	
Bhopal-Ujjain - - - - -	Ditto - - -	110	880,000	- ditto	
Rutlam-Godra - - - - -	Ditto - - -	110	1,000,000	- ditto	

0 61.

Bengal and Assam.

Benares-Palamow-Lohardugga-Cuttack Pooree	Broad	541	5,387,000	Protective and productive	} Previous figures and route revised according to recent reconnaissances.
Gya-Palamow	Ditto	88	812,000	Productive	
Bhangulpore-Bowsee	Metre	80	140,000	- ditto	} Chandpur substituted for Comilla as the river terminus.
Kissenganj-Kotechandpore	2 feet	19	40,000	- ditto	
Chittagong-Chandpur-Comilla	Metre	128½	1,082,000	- ditto	
Comilla-Cachar	Ditto	175	1,406,000	- ditto	

Assam

Cachar Golaghat-Dibrugarh	Metre	311	3,003,000	Productive	} Previous figures and route revised according to recent reconnaissances.
Branch from the above at Laming to Gowhati	Ditto	122	976,000	- ditto	

Madras.

4 24

Muyaveram-Tranquebar	Metre	15	66,000	Productive	} Mutupet will probably be substituted for Tranquebar as a terminus
Palghat-Dindigul	Ditto	100	300,000	Protective and productive	
Madura-Paumben	Ditto	94	300,000	- ditto	} This project is being completely revised and re-surveyed on a new route via the Arienkoon Pass.
Tinevelly-Trevandrum-Quilon, by Aramboly Pass	Ditto	132	700,000	Productive	
Nilgiri Railway—Metapollium-Conoor	Ditto	12	200,000	- ditto	
Shoranoor-Cochin	Broad	59	660,000	- ditto	
Beypore-Culcut	Ditto	7	110,000	- ditto	} This will probably be constructed as an extension of the Madras Railway
Beypore-Gudalar-Mysore	Ditto	128	900,000	Productive and protective	

Bombay

Karwar-Hubli	Broad	109	794,000	Productive.
Barsi Station—Pundarpore-Miraj	Ditto	107	450,000	Productive and protective.
Barsi Station to Barsi	Ditto	20½	120,000	Productive.
Surat-Bardoli Songudh-Nandurbar	Ditto	91	455,000	- ditto

Total MILEAGE and Cost

3,482½

24,288,000

STATEMENT OF INCREASES AND DECREASES IN SCHEDULE A, REVISED

RAILWAYS indispensable for PROTECTIVE or other URGENT PURPOSES, to be completed or made by the STATE in default of other Agency on its behalf

DESIGNATION OF RAILWAY.	Total Cost in Conventional Sterling		Difference	CAUSES OF INCREASE AND DECREASE.
	Schedule of 1883	Schedule of 1884.	More or Less	
<i>(a). Capital to be raised and Interest Paid by Government of India.</i>				
	£	£.	£.	
Wazirabad-Sialkot - - - - -	100,000	95,000	—5,000	Saving on revised Estimate.
Rewari-Hissar-Ferozapore, with branch to Fazilka - - -	1,257,000	1,413,400	+156,400	Increase on ditto due to alteration of alignment, &c.
Jhansi Burgurh - - - - -	1,300,000	-	-	} —400,000 Insufficiency of original Estimate, new route and substitution of broad for metre gauge
Jhansi-Maniokpur - - - - -	-	1,700,000	-	
Vizagapatam-Raipur - - - - -	2,900,000	2,900,000	—	} +175,000 Increase on final location survey
Bellary-Kistna - - - - -	1,800,000	1,775,000	+225,000	
Ditto - Hindupur Extension - - - - -	-	700,000	+700,000	} +700,000 New work, see Secretary of State's Despatch, No 120, of 4th October 1883
Wontumetta Nellore - - - - -	600,000	-	-	
or Cuddapah-Nellore - - - - -	760,000	366,400	—393,600	} —233,600 Saving by substitution of new route to Tirupati
Ditto - Kadiri Extension - - - - -	-	850,000	+850,000	
Damacherla Vellore-Arni-Villupuram - - - - -	-	840,000	+840,000	} +840,000 New work, see Secretary of State's Despatch, No. 143, of 5th November 1883
Minor Famine Lines in Mudras - - - - -	-	900,000	+900,000	
Bezwaada to Nizam's Frontier - - - - -	-	256,000	+256,000	} +256,000 New proposals, see paragraph 14 of this Despatch
Warora-Chanda - - - - -	-	350,000	+350,000	
Prome-Allanmyo - - - - -	375,000	375,000	—	} +350,000 Lanes to be made under new engagement with the Nizam's Government, see Despatch to secretary of State, No. 45—Political, of 30th April 1883
Total Cost - - - - - £.	8,182,000	12,520,800	+4,338,800	
Deduct—				
Amount spent to end of year - - - - -	403,000	1,346,010	—	
Remainder for subsequent Years - - - - - £	7,779,000	11,174,790	—	

0.61.

(b) Capital to be raised by Government of India, interest paid by Provincial Governments.

Amritsar Pathankot - - - - -	400,000	600,000	+140,000	Increase on revised Estimate, which includes rolling stock
Bareilly-Philibhit - - - - -	175,000	175,000	—	
Dacca Mymensingh - - - - -	600,000	600,000	—	
Darbhanga-Pipraghat - - - - -	180,000	- - -	-180,000	Line completed in 1888.
Mozufferpur Bettiah - - - - -	470,000	- - -	-470,000	- - ditto.
Assam Behar Railway				
1 Mozufferpur-Hajipur - - - - -	220,000	220,000	—	
2 Sonapore-Hajipur - - - - -	120,000	142,000	+22,000	Increase due to alteration in design of the Sonapur bridge.
3 Jhajarpur-Dineypur - - - - -	1,570,000	1,465,000	-105,000	Decrease on revised Estimate.
4. Munihari Branch - - - - -	- - -	560,000	+560,000	New work, see Despatch to Secretary of State, No. 27 R., of 26th May 1888.
6. Kaunia-Dhubri - - - - -	- - -	560,000	+560,000	
Rangoon Tongoo (Sittang Valley) - - - - -	1,170,000	1,170,000	—	
Total Cost - - - £.	4,915,000	4,932,000	+17,000	
Deduct—				
Amount to be spent to end of year - - - - -	1,422,000	2,087,790	—	
Remainder for subsequent Years - - - £.	3,493,000	2,899,210	—	

4 B

(c) Capital to be raised by "Construction and Working" Companies, Interest to be paid by Government of India

Saharanpore-Roorkee-Moradabad, with branch to Hardwar - - - - -	1,500,000	- - -	-1,500,000	Omitted on incorporation of extension with main undertaking of Oudh and Rohilkhand Railway Company
Bankapur-Harihar - - - - -	800,000	800,000	—	
Western Deccan - - - - -	1,940,000	1,800,000	-140,000	Saving on final location survey
Total - - - £	3,740,000	2,100,000	-1,640,000	

In the Estimate of 1885, the broad gauge Estimate for Vizagapatam Raipur line was adopted, and also the shorter alternative to Nellore. The Estimate of 1884 for the Vizagapatam Raipur is for a metre gauge railway.

Railways indispensable for Protective or other Urgent Purposes, to be Completed or made by the State in default of other Agency on its behalf—continued.

DESIGNATION OF RAILWAY	Total Cost in Conventional Sterling		Difference	CAUSES OF INCREASE AND DECREASE.
	Schedule of 1883	Schedule of 1884.	More or Less	
<i>(d) Capital payable from Provincial Balances, no Interest Charge</i>				
	£.	£	£.	
Faukhbad-Hathras, including Kashgunj-Soron Branch	400,000	561,000	+ 71,000	Increase due to revised Estimate and addition of Kashgunj Soron Branch, see Secretary of State's Despatch, No 81 R, of 7th June 1888
Bridge over the Jumna at Mattra	90,000			
Durgapore Parbhatpore	120,000	- - -	- 120,000	Lane will be completed in 1888-84.
Diamond Harbour Extension of Calcutta and South Eastern Railway	215,000	- - -	- 215,000	- ditto - - - ditto - - - Already opened
Total Cost - - - £.	825,000	561,000	- 264,000	
Deduct,—				
Amount to be spent to end of year	472,000	512,550	—	
Remainder for subsequent Years - - - £.	353,000	48,450	—	
<i>(e). Capital to be raised by Private Companies, under "Limited Guarantee" System.</i>				
Ranaghat-Santipore-Bhagwangola	810,000	810,000	- - -	Commencement of work in 1883.
Bhopal Jhansi-Gwahor and Jhansi-Cawnpore	3,500,000	3,500,000	- - -	
Bankur-Nagpur	4,500,000	5,800,000	+ 800,000	Increase on selection of southern route and final location survey
Lalitpore Saugor Damoh-Katni	1,820,000	- - -	- - -	
Katni-Umeria-Bilaspur	1,900,000	- - -	- 970,000	Decrease due to substitution of Estimate on reconnaissance for mileage rate.
Bilaspur-Etawah	- - -	2,450,000	- - -	
Total Cost - - - £.	12,230,000	12,060,000	- 170,000	
GRAND TOTAL COST - - - £.	29,851,000	32,173,800	2,322,800	
Deduct,—				
Amount to be spent to end of year	3,299,000	3,911,350	—	
Remainder for subsequent Years - - - £.	27,552,000	28,262,450	—	

ABSTRACT OF WAYS AND MEANS, AND INTEREST.

	Estimate of 1883.		Estimate of 1884	
	£	£	£	£.
Capital to be borrowed by Government of India (a) and (b), less recovery under (e) - - - - -	10,720,000	- - -	13,444,000	
Ditto - ditto by Companies on behalf of Government of India (c) -	3,749,000	- - -	2,100,000	
		14,469,000		15,544,000
Ditto - ditto on their own account (e) -	-	12,230,000	- - -	12,040,000
Ditto to be provided from Provincial balances (d) - - - - -		353,000	- - -	48,450
TOTAL - - - £		27,052,000	- - -	27,682 450

ABSTRACT OF CAUSES OF INCREASE AND DECREASE.

	£
Alterations in routes, &c. - - - - -	- 55,200
Alteration of gauge and route, and revision of estimate - -	+ 400,000
Revision of estimates - - - - -	- 43,000
Transfer to Guaranteed Company - - - - -	- 1,500,000
New projects entered - - - - -	+ 4,450,000
Completion of lines - - - - -	- 935,000
TOTAL - - - £.	+ 2,322,800

MINUTES by Members of the FAMINE COMMISSION now in India on the Protective character of certain RAILWAYS.

On 23rd January 1883, the Government of India addressed the Secretary of State at length on the entire question of railway policy, recommending certain important modifications of the existing arrangements. Amongst other proposals, it suggested the construction of 3,837 miles of railway "indispensable for protective or other urgent purposes," capital for which, 27½ millions, was to be raised in various ways. Amongst these projects were three—

- 1 Bhopal-Jhansi Gwalior and Jhansi-Cawnpur, 385 miles, at an estimated cost of 3½ millions
- 2 Barakur-Nagpur, 627 miles, at 4½ millions.
3. Bilaspur-Kutni-Lahtpur (since changed to Etawah, 380 miles, at 3½ millions

These lines the Government showed might, with good reason, be expected to be productive, and they described them as "Protective Railways of the highest importance", and they proposed that they should be granted to companies on "Bengal Central Terms," the annually accruing interest, aggregating nearly one million sterling up to 1887-88 (inclusive), being debited to the annual grant of 750,000 £ available for protection against famine.

In his reply, dated 16th August, the Secretary of State took exception to various parts of the scheme. Amongst other objections, he observed that several of the lines proposed would not, in the opinion of the Famine Commissioners, have been deemed protective in the strict sense of the word. "In particular the two lines, Bengal and Nagpur, and the "lines from Bhopal to Gwalior and Jhansi (Cawnpur?), appear to me to have no greater "claim in this respect than could be advanced on behalf of every railway." On this ground, accordingly, apart from the general policy of thus charging interest to the Famine Insurance Fund, the proposal was considered inadmissible. The Secretary of State, however, concurred with the Government of India in thinking that the time had arrived for considering the propriety of extending the limits of public expenditure on railways, and announced the intention of the Government to propose the appointment of a Select Committee of the House of Commons next Session for this purpose.

The Government of India replied to this letter on 24th September 1883, combating the various objections of the Secretary of State, and in paragraphs 14, 15, and 16 they dealt with the views expressed as to the non-protective character of the Bhopal-Gwalior and Nagpur-Bengal lines.

In the meanwhile the Government of India had, on the 2nd June 1883, requested sanction to the grant of the Bilaspur-Kutni line on Central Bengal terms, 352 miles, broad gauge, on an estimate of Rs 2,45,00,000. On the 48th August the Government requested sanction to construct as a State railway, a line from Jhansi to Manickpur, 180 miles, broad gauge, at 1,700,000 £. On the same date the Government of India supplied the Secretary of State with details of the Nagpur Bengal scheme; in paragraphs 42 and 43 they insisted on its importance as a protection against famine. They urged its concession to Messrs. Hoare, Miller, and Company on the "Bengal Central" or other terms in harmony with the principle of a limited guarantee. On 8th September the Government reiterated its request for the concession of Bhopal-Gwalior and Jhansi-Cawnpur line to a company with a limited guarantee, and as the prospects of the season were at this time very gloomy, they urged the desirability of the line being taken in hand without delay. This proposal was negatived by the Secretary of State on 25th October 1883, as was that regarding the Nagpur-Bengal Railway on the 31st idem. On 8th November 1883, the Secretary of State sanctioned the Jhansi-Manickpur scheme, but on the narrow gauge. The Bilaspur-Etawah project was on the 23rd August stated by his Lordship to be reserved for future consideration.

The whole subject will therefore, it is to be presumed, go before the Select Committee of the House of Commons, and we are now invited to express an opinion on the question of the right the lines in question to be regarded as protective railways, in the sense in which that word was used in the Famine Commission Report.

Our view of railway extension as a protection against famine was based on the calculation that a railway could bring supplies in excess of any probable demands for food to an area of 25 miles on either side of it, *i.e.*, 50 miles wide, and taking British India to contain 1,000,000 square miles, it followed that 20,000 miles of rails would be requisite, or 10,000 more than the length at that time in existence. Striking out from this 10,000 miles

miles mountainous and desert tracts and those naturally placed beyond danger, we suggested as probable the view that 5,000 miles would go far to remove all future risk of serious difficulty in supplying food to any district

This estimate was, on the face of it, of the roughest possible order. It purported to deal only with 1,000,000 square miles, whereas British territory in India consists of 900,000 square miles, and the Native States of 575,000 square miles with 60 millions of inhabitants—an item which the Government does not, and cannot, from the nature of the case, disregard. The object of our contention, as I understand it, was to show that, wherever a railway was taken, the country for 25 miles on each side of it could be supplied with food, and that such an extension of our railway system as would bring every part of the country within that distance of a line, was not a task which was in any way beyond attainment. In support of this contention, we pointed out that, even at the rate of 2½ millions per annum, the 60 millions necessary for the completion of the 10,000 miles would be available in the course of 25 years. But so far were we from acquiescing in any such lengthened postponement of the completion of the means of protection, or any curtailment of the former system of borrowing for railway extension, that we expressed our "concern that the apprehension of financial difficulties should have led to its partial suspension, and our hope that nothing may stand in the way of a very early return to the former scale of grants for this paramount object, or the adoption of some other equivalent form of aid." The statistics at our command did not enable us to specify, except in the most general way, the localities to be traversed by the future railways. For instance, we had nothing to guide us in estimating the probable cost of a line from the Central Provinces to Bengal, and we were equally ill-supplied with the statistics bearing on the feasibility of railway extension to the north-west of the Central Provinces and Bundelkhand. We did, however, in paragraph 17 of Section 4 refer to the country between the Jumnna and the Jubbulpur Railway as urgently in need of railway construction, and also to the desirability of bringing Orissa into connection with Bengal, though we were not then able to say whether this could be better done by canal or rail.

Since that time the necessary surveys have been made, and information collected as to the probable earnings of lines in either directions, and a system of lines has been proposed by the Government of India which would have the effect of placing the grain of the Central Provinces at the command of every part of India. The line Raurpur-Bilaspur-Kutni-Etawah will bring grain both on to the main line at Kutni for Allahabad and the parts commanded thence, and to the Bhopal-Gwalior line at Etawah *en route* for Jhansi Gwalior, Agra, and Cawnpur, while the line from Jhansi to Manickpur will traverse a region which for uncertainty of rainfall and general depression of the inhabitants, is probably as badly circumstanced as any in India.

The proposed line from Bhopal to Jhansi and thence to Agra and Cawnpur, will render the supplies brought by the Great Indian Peninsular and Bilaspur-Etawah lines available for famine relief in Bundelkhand, where famine is always a matter of probable occurrence, and is sooner or later inevitable, as well as Rohilkhand and the country to the north of the East Indian Railway.

The line from Bilaspur to Nagpur, again, and the Bhopal-Gwalior would be of the highest possible importance for famine relief purposes in the Deccan and Madras; while the Nizam's new line will render these supplies available for the Hyderabad country, and within far easier reach of Madras.

On the other side the lines from Bilaspur to Batakur and Chybassa to Cuttack and Poores will provide for the rare, but by no means impossible, occurrence of dearth in Behar in the one case and Orissa on the other, not only making the supplies of Orissa and the Central Provinces available in case of scarcity in Behar, but rendering the supplies from East Bengal available, as well as those of the Central Provinces, in case of scarcity in Orissa. Moreover, the line from Benares to Chandel would greatly increase the importance of both as a means of famine relief.

I do not see that it is possible to put the case more strongly than it is put in paragraphs 14-16 of the Government of India's letter of 24th September 1883, and the letter of 8th September 1883, and its enclosures, show how close at hand the risk of famine is, and how easily the Government may have Bundelkhand on its hands for famine relief. In the case of the Bilaspur-Etawah line, there is the additional advantage that it will add greatly to the supply of coal and to its cheapness, thus stimulating locomotion on all railways within reach. As regards the Nagpur-Bengal line, the argument in favour of its importance as a means of protection and relief in times of famine, contained in paragraph 42 of the Government of India's letter of 18th August 1883, seems to me complete.

In considering the policy of assisting any of these lines from Famine Insurance Funds, the question seems to me to be whether the money thus spent can be invested in any other way in which it will operate more effectively in diminishing distress and in assisting relief operations on the occurrence of famine. When it is remembered that a pound of food is carried by rail 2,000 miles for $\frac{1}{4}d.$ or $\frac{3}{4}d.$, and that every broad gauge train carries the food of 1,800 people for a year, and when these results are contrasted with

the feeble and costly attempts at carriage by bullock carts in the time of famine, it seems to me impossible to employ the Famine Fund more directly in a way that will save life and lessen expenditure in the future than by running lines from a region which may be justly called the granary of India, which is to a large extent exempt from crop-failures, into regions where the rainfall is so precarious, and other circumstances of the country and population so unfavourable, as to make it certain that sooner or later the Government will have to come to the aid of a famine-stricken community. The opening up of the corn-fields of Central Provinces for the rest of India seems to me *the great precaution against famine* of which the circumstances admit, and till that is accomplished, I should regard the paying off of debt or any other employment of the Famine Insurance Fund as the worst possible economy, to say nothing of the saving of human life to which the existence of the railways will undoubtedly conduce.

Calcutta, 1 January 1884

H. S. Cunningham.

I CONCUR in what Mr Cunningham says as to the views of the Famine Commission, as I recollect them, and my personal views as a member of the Commission coincide with his. We gave a rough idea of what might be the possible extent and cost of railways of pressing necessity for famine relief, to show that their execution was not beyond our means, but we had no data for working out the details, as indeed we expressly said. I am sure we had no intention that anything in which we concurred in our report should be used as an argument for limiting the extension of railways. A glance at our chart of famine areas between 1833 and 1878, will show how these are massed in the north and south of the Continent, extending also down the East Coast, but omitting a large tract in the centre of India. The north and south do not generally suffer simultaneously, and can help each other in turn, and the Central Provinces may be said to be a granary always available to help either. Any line of railway, therefore, which connects the famine areas of the north and south, and more especially which connects either or both with the Central Provinces, will certainly be a great protective agency in some future famine; and it does not follow that because one line penetrates a famine tract, several lines converging towards it from various sources of food-supply will not be necessary in case of severe famine.

Bombay, 6 January 1884

J. B. Peile.

I ENTIRELY agree with Mr Cunningham's Minute, and am convinced that the Famine Commissioners would have held railways from Bhopal to Gwahor, and from Jhansi to Cawnpore and Manickpur, as also one from Bilaspur to Etawah, and the Nagpur-Sitarampur line, to be eminently important for prevention of famine. I trust that the Government of India will press the argument for a large extension of railways most strongly before the Select Committee.

10 January 1884

C. E. Elliott.

The two points raised in the Secretary of State's Despatch, No 7, dated 16th August 1883, are—

- 1st. That the proposals of India go beyond what was contemplated by the Famine Commission.
- 2nd. That some of the lines proposed not being protective in the strict sense of the word, the payment of interest from the Famine Insurance grant would be a diversion of that fund from the purpose for which it was designed.

As regards No. 1, it is to be regretted that we of the Famine Commission did not place our meaning beyond the possibility of question.

Whatever construction this part of our report may be susceptible of, I have no hesitation in affirming that the members of the Commission were unanimous in considering that railway extension, including the completion of systems then in progress, should be pushed on as rapidly as possible; and in view of this we insisted (paragraph 11) on the importance of the requisite capital being provided in some of the ways therein indicated, which

is not consistent with the idea that we considered all exigencies would be met by a gradual development of the protective system extending over a quarter of a century. A liberal outlay at present must prove economical in the future, as in the event of a scarcity occurring in any of the unprotected tracts, the expenditure on relief would be far in excess of the outlay requisite to secure the position. Putting aside, therefore, considerations of humanity, the vigorous prosecution of the works commends itself on financial grounds.

As regards the second point, it seems to me that the Government of India's Despatch of the 24th September clearly demonstrates the propriety of temporarily applying the Famine Insurance Funds to the payment of interest. If the lines were merely protective, I presume there would not be a doubt on the subject; and the fact that, while fully serving the purpose of protection, they are likely to become productive—thus making the liability of funds temporary instead of permanent—can hardly be used as an argument against the arrangement proposed.

We have to enfranchise ourselves against a foe who may be upon us at any time, and whose attack, if we are caught unprepared, will have to be bought off at a cost in comparison of which the expenditure now proposed will be a mere flea bite. Is there any other way by which we can secure our position within a reasonable time? Save that indicated at the close of paragraph 17 of the Government of India's Despatch, I cannot see any. As to the value of the lines proposed as a protection from famine, my opinion, in the absence of local knowledge, is not worth much, but judging from the maps published with our report, they seem to me admirably adapted for the purpose, bringing as they do the localities liable to drought in communication with the grain-producing centres where climatic influences are the most favourable. The opening up of the Central Provinces will be a boon to the Northern and Western India, and if the expectation held out to us of the Nagpur-Raipur line being extended south-east to Vizagapatam is fulfilled, Madras will share in the benefits, and in return provide the Central Provinces with cheap and wholesome salt which is now carried on pack bullocks.

9 January 1884

H. E. Sullivan.

J. Gordon, Esq., Secretary to the Chamber of Commerce, Bombay, to the Secretary to Government of Bombay, Public Works Department (Railway)

16 January 1884

I HAVE laid before the Committee of the Chamber of Commerce your letter, No 2064, of the 21st ultimo, together with the Secretary of State's Railway Despatch, No 6, dated 29th November 1883, which accompanied it. In that Despatch his Lordship states that the determination of the general policy, which shall in future be adopted in regard to the more rapid extension of railways in India, has been postponed until a Select Committee of the House of Commons shall have had an opportunity of considering the subject.

In reply to this communication the Committee desire to point out the long delay inseparable from the working of a Select Committee, and the general consensus of opinion as to certain lines, such as the extension of the Bhopal State Railway to Gwalior, with a branch from Jhansi to Cawnpore, the Jhansi-Manickpur Railway, the Nagpur-Bengal Railway, and the railway from Godra to Rutlam being, in addition to the lines referred to in his Lordship's Despatch, immediately required. The committee beg very earnestly to suggest that these railways be sanctioned and the works proceeded with at once, and on the broad gauge, leaving the Select Committee to deliberate on the general policy of Indian railway extensions only. The committee request me to add that immediate railway extensions all over India on a large scale is so obviously desirable from every point of view, that even for the consideration of the whole subject a Select Committee may be deprecated as a source of unnecessary delay, but as the Secretary of State appears to have decided on a Select Committee, all the committee of the Chamber would now ask is, that the lines detailed above be placed outside the sphere of its deliberations, and proceeded with without any further hesitation.

In conclusion, the committee desire me respectfully to request that a copy of this letter may be forwarded to the Secretary of State for India.

RESOLUTION by the Government of India, Public Works Department, No 5 R. A.,
4th January 1884.

Read again—

Public Works Department Resolution, No. 190-A G., 27th June 1883.

OBSERVATIONS—Up to the 31st March 1883, the net amount advanced to the Guaranteed Railways (excluding the East Indian Railway) on account of guaranteed interest, less net revenue, the share of surplus profits paid to the Companies, &c, was	£.
	24,773,000
The net amount advanced to the East Indian Railway up to the 31st December 1879, when the Railway was purchased by the State, on account of guaranteed interest, the share of surplus profits paid to the Company, &c., was	3,517,000
The net profits accruing to the State from the East Indian Railway from the 1st January 1880 to the 31st March 1883, amount to	4,389,000
The net revenue from the East Indian Railway up to 31st March 1883, consequently amounts to	872,000
The net charge on account of Guaranteed Railways and the East Indian Railway up to 31st March 1883, may consequently be stated at	23,901,000
	Rs.
or, allowing for exchange at contracts rates, about	26,00,00,000
The net charge for interest, less traffic receipts, on account of State Railways classed as Productive Public Works up to the 31st March 1883, amounts to	4,51,14,967

The total capital outlay on Guaranteed Railways, State Railways, classed as Productive Public Works, and the East Indian Railway up to 31st March 1883, was as under —

	Rs.
Guaranteed Railways	72,75,42,464
State Railways	31,35,44,573
East Indian Railway	31,82,61,420
TOTAL	Rs 1,35,93,48,457
or if the premium paid on the purchase of the East Indian Railway, or be added	6,55,00,000
to	1,42,48,48,457

The net revenue realised from these railways in 1882-83, was as under:—

	Rs
Guaranteed Railways	3,56,11,717
State Railways	1,11,21,460
East Indian Railway	2,77,90,436
TOTAL	Rs. 7,47,23,613

This net revenue amounts to 5 50 per cent. on the total capital outlay of 1,35,93,48,457 rupees, or to 5 24 per cent on the total capital outlay, plus the premium paid to the East Indian Railway Company on the purchase of that railway

The

The payments made to the companies during the year on account of their share of surplus profits and contributions to the Provident Funds, were as under .—

	<i>Rs.</i>
Eastern Bengal - - - - -	7,63,596
Bombay, Baroda, and Central India - - - - -	8,35,075
Great Indian Peninsula - - - - -	32,67,233
East Indian - - - - -	24,71,513
TOTAL - - - <i>Rs.</i>	73,37,446

Deducting this sum from the net revenue, the balance, 6,73,86,167 rupees, amounts to 4.96 per cent. on the capital outlay of 1,35,93,48,457 rupees, or 4.73 per cent. on the capital, plus the premium paid to the East Indian Railway Company on the line being purchased.

If to the Capital cost of the railways the amount of interest advanced to the companies in past years, viz., 26,00,00,000 rupees, and the net charge for interest on the capital outlay on State Railways, less net traffic receipts, viz., 4,51,14,967 rupees be added, a total of 1,66,44,63,424 rupees will be arrived at, the net revenue of 7,47,23,613 rupees would yield a return of 4.49 on this amount. Again, if the capital be further increased by the premium paid on the purchase of the East Indian Railway, 6,55,00,000 rupees, to 1,72,99,63,424 rupees, the net revenue would amount to 4.32 per cent. on the enhanced capital.

Deducting from the net revenue of 7,47,23,613 rupees, the payments made to the companies of 73,37,446 rupees on account of surplus profits, &c., the balance, 6,73,86,167 rupees, would amount to 4.05 per cent. on the capital outlay, plus the balance of interest charges, or 1,66,44,63,424 rupees, or to 3.90 per cent. on the capital outlay, plus the balance of interest charges, plus the premium paid to the East Indian Railway, or 1,72,99,63,424 rupees.

ORDER—Ordered, that the foregoing observations be communicated to the Local Governments and administrations and the officers noted below, and the Department of Finance and Commerce for information.

Ordered also, that it be published in the "Gazette of India."

The Governments of Madras, Bombay, Bengal, the North-Western Provinces and Oudh, and the Punjab, in the Public Works Department
 The Chief Commissioners of the Central Provinces, British Burma, Assam, and Coorg
 The Agents to the Governor General for Central India and Rajputana.
 The Director General of Railways.

APPENDIX II --(REVISED)

ESTIMATED Results from Constructing all RAILWAYS included in SCHEDULE A., omitting certain Lines under Sub-Head (E), vide Paragraph of Despatch No dated

534

APPENDIX TO REPORT FROM THE

	Length	Estimated Cost.	Probable Outlay to Complete	Estimated Net Revenue (in Thousands of Rupees)				
				1884-85	1885-86	1886-87	1887-88	1888-89
IMPERIAL				RAILWAYS UNDER CONSTRUCTION				
		£.	£	Rs	Rs	Rs	Rs	Rs
Wazirabad-Sialkot - - - - -	25½	95,000	20,000	30	40	46	50	50
Rewari Hissar Ferozepore, with Branch to Fazilka - - -	302	1,413,400	483,608	2,50	3,50	4,00	4,50	5,00
Jhansi-Mankapur - - - - -	180	1,700,000	1,643,378	-	-	25	1,00	2,00
Bellary-Kistna - - - - -	255	1,775,000	1,820,404	-	-	10	75	1,00
Cuddapah-Nellore - - - - -	66	866,400	836,400	-	-	-	25	50
Total IMPERIAL - - -	828½	5,849,800	4,003,790	2,80	4,25	6,45	8,50	10,85
PROVINCIAL								
Amritsar-Pathankot - - - - -	65	600,000	129,576	1,00	1,50	2,00	2,25	2,50
Bareilly-Philbbitt - - - - -	32½	175,000	63,633	25	50	60	70	75
Dacca-Mymensigh - - - - -	85	600,000	329,385	50	1,00	1,50	2,00	2,50
Assam-Bihar Railway								
1 Mozufferpur Hajipur - - - - -	34	220,000	114,119	} 25	} 75	} 3,00	} 6,40	} 6,50
2 Sonapur-Hajipur - - - - -	2½	142,000	142,000					
3 Jhujarpur-Dinajpur - - - - -	} 206½	} 1,465,000	} 1,365,000					
Munbari Branch - - - - -								
Kaunia-Dhubri - - - - -	54	560,000	560,000					

061.

Rangoon-Tongoo (Sittang Valley) - - - - -	168	1,170,000	105,487	1,50	8,00	8,50	4,00	4,50
Farukhabad Hathras - - - - -	111	661,000	48,450	75	1,50	2,00	2,50	2,80
Bridge over the Jumna at Muttra - - - - -	1							
Total PROVINCIAL - - - - -	764½	5,498,000	2,947,660	4,25	8,25	12,60	16,85	19,35
Total IMPERIAL and PROVINCIAL - - - - -	1,688	10,842,800	6,951,450	7,05	12,50	19,05	25,85	30,20
IMPERIAL.		RAILWAYS PROJECTED.						
Vizagapatam-Rapur - - - - -	850	2,900,000	2,900,000	- - -	- - -	50	1,00	2,00
Bellary-Kistna—Hindupur Extension - - - - -	115	700,000	700,000	- - -	- - -	- - -	25	75
Cuddapah-Nellore—Kadiri-Extension - - - - -	130	850,000	850,000	- - -	- - -	- - -	10	80
Damanherla-Vellore-Arni-Villupuram - - - - -	140	840,000	840,000	- - -	- - -	- - -	- - -	25
Minor Famine Lines in Madras - - - - -	150	900,000	900,000	- - -	- - -	- - -	- - -	25
Bezwada to Nizam's Frontier - - - - -	32	256,000	256,000	- - -	- - -	5	25	25
Warora-Chanda - - - - -	35	350,000	350,000	- - -	- - -	- - -	5	25
Prome-Allanmye - - - - -	42	375,000	375,000	- - -	- - -	- - -	- - -	- - -
TOTAL - - - - -	994	7,171,000	7,171,000	- - -	- - -	55	1,05	4,25
Total under CONSTRUCTION and PROJECTED - - - - -	2,577	18,018,800	14,122,450	7,05	12,50	19,60	27,00	34,55
Bankapur-Haribar - - - - -	50	800,000	800,000	- - -	- - -	1,00	2,00	4,00
Western Deccan - - - - -	242½	1,800,000	1,800,000					
Ranaghat-Santipore-Bhagwangola - - - - -	92	810,000	790,000					
GRAND TOTAL - - - - -	2,961½	20,928,800	17,012,450	7,05	12,50	21,10	30,50	41,05

SELECT COMMITTEE OF EAST INDIAN RAILWAYS.

585

The Chairman of the Madras Chamber of Commerce to the Secretary to the Government of India, Public Works Department, 19th October 1883

I HAVE the honour to forward, for your information, the copy of the following resolution which was passed at the last general meeting of this Chamber, and to request that you will have the goodness to bring the same under the consideration of his Excellency the Viceroy in Council —

“ That the Madras Chamber of Commerce consider that the present system of only expending the sum annually levied for Famine Insurance is unsatisfactory, as being inadequate to the growing wants of the country, and dangerously deferring, for so many years, works of such vital importance as preventives against famine. Further, that the Chamber consider that for some years, and until the necessary preventive works are well in hand, that the Government should borrow for public works such sums the interest on which will not exceed the sum levied as a Famine Insurance. That the views of this Chamber be communicated to the Chambers of Commerce of Bengal and Bombay, and that their aid be requested ”

Having submitted the suggestion embodied in this resolution to the Bombay Chamber, I am informed by that Chamber that “ the proposal has their entire approval, and that in their opinion, the step suggested is precisely the one which the Government of India ought to take ” The Bombay Chamber add —

“ They (the Government of India) should use the Famine Fund for the purpose of borrowing money to make railways, instead of using the fund itself. The Committee will be prepared cordially to support your Chamber in the suggestions submitted in your letter.”

J. Gordon, Esq, Secretary to the Bombay Chamber of Commerce, to the Secretary to the Government of India, Public Works Department, 6th December 1883

I HAVE the honour, by the direction of the Committee of this Chamber, to submit, for the favourable consideration of his Excellency the Viceroy and Governor General in Council, the following resolution, which has been passed by the Madras Chamber of Commerce —

“ That the Madras Chamber of Commerce consider that the present system of only expending the sum annually levied for Famine Insurance is unsatisfactory, as being inadequate to the growing wants of the country, and dangerously deferring, for so many years, works of such vital importance as preventives against famine. Further, that the Chamber consider that for some years, and until the necessary preventive works are well in hand, the Government should borrow for public works such sums the interest on which will not exceed the sum levied as a Famine Insurance. That the views of this Chamber be communicated to the Chambers of Commerce of Bengal and Bombay, and that their aid be requested.”

The views therein expressed have, so far as they go, the entire approval of this Chamber, and the Committee hope that they will commend themselves to his Excellency

Extended facilities for communication are one of the most valuable means of promoting the advancement of the prosperity of this country, the beneficial utilization and development of its great material resources, and the progress of its people; and are calculated to check and prevent grave disasters from local and periodical famines more than, probably, any other gift the Government can bestow upon the poorer classes. The Chamber cannot but view with profound regret the lamentably defective state of the present railway communications, and the very slow progress which is being made towards extending them sufficiently to meet the great and growing wants of the country

The Committee, therefore, desire also to advocate, in addition to the proposal made by the Madras Chamber, the application, in whole or in part, of the two and a-half millions sterling, that Government now provide annually as a fund with which to raise the capital required to construct State Railways on a large and comprehensive scale within the next few years, or to supplement, by way of loan, the capital of the existing railway companies, thus securing for the country and the finances of the State at an early period the benefit that cannot fail to follow the judicious extension of new and carefully laid out lines.

The Committee further desire to suggest that a Special Commission to consider and report on the lines of railway needed and to be undertaken might be appointed by the Government of India.

STATEMENT showing the AREA, POPULATION, and Loss of POPULATION during the FAMINE in the Anantapur District.

0 61

	Area in Square Miles.	Population in 1881	Density of Population per Square Mile.		Population in 1877	Loss of Population in 1881 as compared with 1877	Per-centage of Decrease as compared with 1877	Numbers on Relief Work on 4th August 1877	Per-centage of Numbers on Relief Works to Population in 1877	Population as it would have been in 1881 with normal increment at 1½ per cent. per Annum	Loss of Population per cent. comparing Actuals of 1881 with normal Figure for same Year
			1877	1881							
Anantapur - - - -	868	91,816	118	106	1,02,761	10,945	10.65	12,750	12.4	1,18,175	22.81
Dharmavaram - - - -	1,192	97,106	101	81	1,20,608	23,502	19.49	12,485	10.4	1,38,809	30.00
Gooty - - - -	1,010	1,10,597	148	110	1,44,668	33,971	23.50	18,317	12.7	1,66,258	33.48
Hindupur - - - -	425	73,270	207	172	87,895	14,625	16.64	2,264	2.6	1,01,079	27.51
Madakaira - - - -	362	55,113	219	152	79,458	24,345	30.64	5,913	7.4	91,877	39.69
Penukonda - - - -	655	73,028	136	111	88,754	15,731	17.72	3,622	4.1	1,02,007	28.46
Tadpatri - - - -	691	98,964	198	167	1,17,811	18,247	15.57	26,806	22.9	1,34,793	26.58
TOTAL - - - -	5,108	5,99,889	146	118	7,41,255	1,41,866	19.07	82,157	11.1	8,52,443	29.68

4 2 3

SELECT COMMITTEE ON EAST INDIAN RAILWAYS.

Appendix, No. 2

PAPER handed in by Mr. J. K. Cross (a Member of the Committee)

REPORT of INDIAN FAMINE COMMISSION, 1880, Part II, Chapter V, Section 10,
RAILWAYS (pages 169 to 174)

RAILWAYS.

Importance of railways

1 WE have already spoken of the very great importance of railways in removing some of the chief dangers of famine, and we may here repeat that had it not been for the lines of railway which traversed the famine area in 1877, the results to the population would have been vastly aggravated, so that in many cases there might have been a complete failure of food for a time, and the task of affording relief, instead of being difficult only, would have become impossible.

Services they perform with rapidity and certainty

2 The effect of the railways that have been opened in India during the last 25 years, of which the total length now amounts to nearly 9,000 miles, has been not only to reduce enormously the cost of inland transport, but also to open up communications between distant provinces which were previously, to all intents, inaccessible to one another, and thus to add very largely to the available resources of all districts in times of difficulty. The power thus obtained has the further great advantage of being applicable with much rapidity and certainty, the speed and regularity of railway-locomotion, set in action by help of telegraphic communication, giving a command over the resources of the country incomparably superior to anything that could have been thought possible before these works were carried out.

Difficulties of distance and time overcome

3. So far as the distribution of food grain in India is concerned, it may be now truly said that, where the country is accessible by railways, distance ceases to be a serious obstacle, and the same holds good of time. Six to eight days suffice for merchandise to traverse India with ease in its extreme dimension, a journey that would otherwise have occupied as many months, and have been attended with the greatest difficulty. In time of drought and famine, the substitution of mechanical for animal power for purposes of transport is another very important advantage which it is not possible to reckon by any money standard.

Great saving in cost of transport

4 During the late famine, grain was sent by rail to the distressed districts over distances of 2,000 miles, and the necessary cost of this sort of transport would not commonly preclude the profitable despatch to even greater distances, if it were requisite, though within the actual geographical limits of the country this could hardly ever be the case. The present tariff rate on the principal lines of railway for full trucks of grain going long distances, say more than 300 miles, varies from about $\frac{1}{4}$ th to $\frac{1}{8}$ th of a pie per maund per mile, or from $\frac{1}{3}$ ths to $\frac{1}{6}$ ths of a penny per ton per mile. On grain carried 2,000 miles the highest of these rates would not add to the ultimate cost to the trader more than 1 anna per seer, or say $\frac{1}{2}$ d per lb; and assuming a cost price in the exporting district of 24 seers per rupee, or $\frac{1}{4}$ d per lb., and a maximum selling price of 8 seers per rupee, or $1\frac{1}{4}$ d per lb in the famine districts, conditions which might be commonly applicable, there would be left, after paying at this rate for 2,000 miles of transport, a margin of 50 per cent. on the cost price of the grain to cover profit and other charges. Taking the lowest rate of freight, $\frac{1}{4}$ th pie per maund per mile, the margin would become nearly 100 per cent on the first cost. The cost of transport by cart is estimated at five times that by rail in ordinary times, but it will increase to 10 times as much during famine, at which last rate a distance of 200 miles by cart would about correspond to 2,000 miles by rail.

Possible further reduction of cost.

5. It may be added that on the East Indian Railway special rates as low as $\frac{1}{4}$ th of a pie per maund, or $\frac{1}{4}$ d. per ton per mile, are in some cases charged, and as it is known that such rates on this line allow a large margin of profit, it may reasonably be hoped that with the extension of railways and the development of traffic it will be found everywhere possible to reduce the grain rates for long distances to this low rate of $\frac{1}{4}$ d. per ton per mile, or lower. The circumstances under which that railway is worked, with easy gradients,

gradients, cheap coal, and a very large traffic, are exceptionally favourable; but even if its standard be not attained, it may confidently be anticipated that, provided the lines are suitably extended, the conditions of railway transport are such as to bring the whole of the food grain of the country within reach of every district in time of scarcity, at a price that will not be prohibitory.

6 To form some approximate conception of the power which any system of railways might have in distributing food, let it be assumed that each line has to provide for a tract of 25 miles in width on either side, or 50 miles in all, also that the separate lines are each 300 miles in length, a distance which would be run over in 24 hours at a slow rate of speed. The area to be thus served will be 50 miles wide by 300 miles long, or 15,000 square miles, and its population at the average rate in ordinary rural districts, say 250 to the square mile, may be reckoned at 3½ millions. One ton of food will supply six persons for a year, so that the year's supply for the whole of this population may be put at 625,000 tons, which distributed over a year will amount to about 1,750 tons daily, and this may be taken as equivalent to six broad gauge, or 10 metre gauge, average train loads of 300 tons and 175 tons each respectively.

Carrying power of railways,

in relation to entire food supply of any tract,

7 We have estimated in the first part of our Report (*see* paragraph 75) that the greatest number of persons ever likely to require to be fed by the State is about 2½ millions for a year, which is one-third less than the population above spoken of, and it would follow that their whole food supply for a year could be carried on a single broad gauge line in four trains daily for that period, or on a metre gauge line in seven trains daily, either of which numbers are well within the limit of what is possible.

to the greatest population likely to require food during a season of famine,

8 In the same place we stated our conclusion that about 15 per cent. of the population of any given area affected by the severest famine will require to be fed by the State at the worst period of distress, and about 8 per cent for the average period of a year. These proportions applied to the hypothetical case we have taken would indicate that one broad gauge train daily, or two metre gauge trains, would supply the maximum demand for State relief along the line of 300 miles, and that one broad gauge train every other day, or one metre gauge train daily, would meet the whole demand spread over a year.

to the population like to require relief in the worst periods of famine.

9 These calculations, we think, satisfactorily show that a suitable system of railways may be confidently relied upon to meet all possible demands likely to be made on them for the distribution of food in time of scarcity. Even with an actual population double that taken in the foregoing calculation, or 500 to the square mile, there would be no difficulty whatever in carrying into any distressed area all that it was likely to require, if the needful supply were brought to the terminus of a railway which should traverse the tract. Such a proportion of mileage to area as that above assumed would require for the million square miles of British India a length of 20,000 miles of railway, of which nearly one-half have already been completed during the last 25 years, or are now under construction.

Additional mileage required for security,

10 That the country should attain the standard of equipment in railways which has thus been spoken of is clearly quite within the limits of what is possible, in a time to which we may reasonably look forward. The experience that has been acquired of late years gives positive proof that railways may be constructed, at a cost which on the average need not exceed 6,000 £ or 7,000 £ a mile for a single line, which shall be capable of carrying from 1,000 to 1,500 tons daily over every mile of their length, and which shall be susceptible of being worked at a profit with a very moderate traffic. In one instance such a line has been made at a cost but little exceeding 3,000 £ per mile. Taking the higher rate, however, of 6,000 £, the total outlay required might be estimated at 60 millions sterling for the 10,000 miles, which sum spread over 25 years would amount to 2½ millions a year, which is about the amount that has for some few years past been appropriated yearly to the extension of railways.

Cost of this addition and time necessary to provide it

The rough estimate which we have thus made of the length of railway that might be required for British India as a whole will, however, at once be seen to be greatly in excess of the probable present needs of the more accessible tracts for which protection is pressingly required, and excluding the mountainous and desert districts and those naturally placed beyond danger, it is probable that less than one-half of the length first named, or 5,000 miles, in addition to the existing lines, would go far to remove all future risk of serious difficulty in supplying food to any part of any district in the whole country, and the obligatory outlay and the time for completing the works would be reduced in a corresponding proportion.

11 We are strongly of opinion that the policy which has led to the investment of borrowed capital in railway extension should not be abandoned, and we must express our concern that the apprehension of financial difficulties should have led to its partial suspension, and our hope that nothing may stand in the way of a very early return to the former scale of grants for this paramount object, or to the adoption of some other equivalent form of aid. It is beyond our province to discuss the question whether the provision of the requisite capital may be best secured and the construction of railways carried on by direct State action or through private companies. But we may remark that there would be manifest advantages in giving free scope to the extension of railways by private enterprise if it were possible, and though the original form of

Importance of providing requisite capital by State action or private companies

guarantee has been condemned, it may not be impossible to find some substitute which shall be free from its defects, and may secure the investment of capital in these undertakings without involving the Government in financial or other liabilities of an objectionable nature. Also, though the steps taken by the Government with a view to offering facilities for the extension of railways where a proportion of the necessary capital is subscribed locally, have not been effectual, great advantages could be gained by interesting local communities and capitalists in making investments in works of local public utility, and we trust that the plan may be further considered, and, if possible, brought into practical operation.

Scheme for provincial distribution of the cost,

12. With a view to the more systematic and consistent development of a system of railways which may give the greatest attainable security to the country as a whole, we consider that it is expedient to frame a scheme for the distribution among the several provinces of the total sum which can be provided for this class of works, based on a consideration of the already existing lines, and of the lines of traffic on which it is expedient to construct new railways, as well as on the general resources of each province and its liability to suffer from drought.

and the work

13. Each province should be required to draw out a scheme for the application of the funds allotted to it extending over a series of some years, and after making provision for bringing into harmony the schemes for adjacent provinces, the several Governments should be left to carry out the lines in the order and on the general plan agreed upon, the principle of provincial financial responsibility being as far as practicable applied in the manner already explained in an earlier part of our Report. In this manner we might anticipate that before another 25 years has passed away there will be no district and no important town in British India, with the exception of the mountain districts, to which railway communication will not be extended.

Importance of cheap construction.

14. In entering upon a comprehensive measure of such a character the Government should specially bear in mind two things. First, that what is now urgently required is the supply in the shortest time possible of the cheapest form of railway which can be relied on as being capable of carrying such a quantity of food grain as has been spoken of. To secure these objects it is essential that the first cost of the works shall be reduced to a minimum, and that while the construction is thoroughly durable, nothing shall be attempted at the outset which may divert the available funds from what is strictly essential to what is only desirable as affording increased convenience. The main object in view is the provision of a substantial but cheap line fit for a comparatively small traffic at moderate speed. The very careful restriction of the capital outlay is alike necessary to ensure to the utmost the early completion of the lines, the reduction of the whole cost to a minimum, and the working of the lines being soon rendered remunerative.

Provincial financial responsibility

15. The second point on which we would place much stress is the adoption of the principle of local provincial responsibility for the financial basis of the whole arrangement. It is of the greatest moment that the sense of local financial responsibility shall at the outset be brought into operation, both in respect to the careful consideration of the character of the works, and to the frugal application of the funds essential for carrying them out. We fully recognise that it may be difficult to attain the great object in view without adding to the financial burdens of the people, and that all possible endeavours should be made to guard against this, and we are satisfied that this end will be best secured by placing on the local executive government the entire responsibility for the protection of the people.

Extent to which these principles have already been accepted

16. These views do not materially differ from those expressed in a Minute by the late Viceroy, dated 14th March 1878, on the subject of railway extension as a means of protection against famine, and we trust that this important State paper may not be lost sight of. The suggestion that schemes of railway extension should be drawn up, such as we have spoken of, has already been acted on in the North-West Provinces, and other Governments have also taken some steps in the same direction.

Suggestions as to lines of railways most needed for famine relief.

17. We are hardly in a position to make any specific recommendations as to the exact lines that might best be taken up for early execution, as many considerations are involved, having reference to questions of engineering, to the engagements the Government may have already entered into, and to financial operations on which we are insufficiently informed. But we may usefully mention certain tracts which are at present unprovided with railways, and are at the same time difficult of access, and liable to suffer from drought, to which it is certainly desirable that attention should be given as soon as practicable.

In Punjab

In the Punjab improved transport is wanted between Delhi and the districts to the north and west of that city, which are irrigated by the Western Jumna Canal, and which will afford a certain source of supply to the arid region to the west and south.

In North-West Provinces.

In the North-West Provinces may be named the province of Bundelkhand, lying between the Jumna and the Jubulpore Railway. In Northern Bengal the districts of Behar and Bhagalpur north of the Ganges also require the extension of the lines already constructed. The communications between Orissa and Eastern Bengal may probably be best secured by means of canals, otherwise a coast line of railway connecting Calcutta with Cuttack and the deltas of the Godaverí and Kistna, and with Madras beyond might be recommended.

Southern

Southern Madras is well supplied with railways, and what seems most needed for In Madras this province is to open a direct communication from the Godavari and Krishna and Nellore to Karnul, Cudalore, and Cudapa. For Mysore the extension of the line now under construction from Bangalore to Mysore, through the northern districts towards Dhárwár, is also important.

Lastly, in Bombay, the opening of lines in the Southern Mahratta country, with access In Bombay to the sea either at Kárwár or near Goa, is very necessary, provision being made for junctions with the Madras Railway at Bellary and with the line from Mysore, and for communications north-westward to Satara and north-eastward to the Great Indian Peninsula Railway, in the direction of Sholapur.

18 We next come to consider the measures that can be suggested for improving the management of the traffic of existing railways in times of scarcity. The whole quantity of grain moved by rail into and through the famine districts in 1877 is not easily reckoned, but the quantity carried in all India was nearly 3½ million tons, and possibly half of this or more was influenced by the scarcity. The whole tonnage of all sorts of goods traffic having been rather less than 8½ millions, it will be readily understood that the pressure on the railways leading to and through the famine area was very heavy, and many complaints have been made as to the deficiencies experienced. Various remedial measures have been suggested, but we do not think that they are likely to be practically operative, and what is aimed at may, in our opinion, be better accomplished otherwise.

19 First may be noticed the alleged insufficiency of rolling stock to meet sudden emergencies. We consider that it would be impracticable and unreasonable to require the provision of any permanent excess of this part of the railway equipment over what experience shows to be from time to time necessary for the ordinary economical working of the lines. The occurrence of seasons of famine is so irregular and the intervals between them are so various that the maintenance of a reserve of stock to meet the possible demands they might occasion would certainly involve great waste. It could not be enforced under the contracts with the railway companies, and the whole burden would fall on the State. Nor do we think that the suggestion of a general reserve of rolling stock belonging to the State, but held for the use of all Indian railways, could be satisfactorily worked out in practice. It has already been negatived, and we do not wish to renew the proposal.

20. But there is little doubt that the working efficiency of all, or most of the railways, could be much increased by the gradual improvement of the rolling stock, and by getting rid as soon as possible of the old wagons of insufficient carrying capacity with which most of the lines originally started, and to this point we believe attention is already being given.

21. Further, it must, in our opinion, be to the gradual extension of railways, and the provision of a network of subsidiary lines of traffic in addition to the main lines now open, that we should look for the future more complete fulfilment of the function which these means of transport have to perform in the distribution of food in time of scarcity. With such a growth of the mileage the quantity of stock will increase in proportion, and the wants of the country will be supplied with the least possible burden on its resources.

22. The question has been raised how far it may be expedient for the Government to endeavour to obtain a reduction of the tariff rates, either as a permanent arrangement or temporarily during time of famine, with a view to increasing the power of the railways to transport grain with a profit to traders over long distances. The last-named system was followed in 1868 and 1873, the loss due to the reduction being made good to the railways by the State. But in 1877 this course was not adopted, and the ordinary commercial tariff rates were charged. The temporary reduction of rates made in the earlier years was without doubt followed by increased traffic, but as it was not possible to distinguish the increase due to this reduction from that consequent on the natural operations of trade, the Government had to pay compensation on the whole quantity carried, and a large outlay was incurred which gave undue profits both to the railway companies and traders. On the later occasion the railways in many cases for long periods carried as much as they were able to carry, and the reduction of rates in such circumstances would have evidently been inoperative in adding to the supplies sent into the distressed districts. Moreover, when the Government becomes the great employer of labour, as it does in times of extreme famine, and regulates the wage in proportion to the cost price of food at the relief works, it becomes a matter of secondary importance whether the cost of the transport of the grain so consumed is all paid to the dealer when he imports it at the tariff rate, or partly to the railway company as compensation and partly as cost of transport to the dealer when he imports it at a reduced rate. These considerations, combined with the circumstance that there has been a general satisfactory tendency to reduce the tariff rates on all the railways to amounts which give no more than a fair profit on the actual cost of transport, appear to us to fully justify the abandonment of all attempts to modify the tariff of railways in time of famine.

23. There is still considerable variation among the rates charged for freight on Indian railways, and it is probable that reduction is in many cases possible without causing loss of income. The power of regulating the tariff within certain limits is already placed in the hands of the Government under the contracts with the companies, and there is a general tendency on the part of all of these to recognise the necessity for establishing 061.

moderate charges. It need hardly be said that in the interests of the public, which, however, are in this respect not altogether identical with those of the railway companies, the object to be aimed at should be to secure the largest remunerative traffic at the lowest possible rates, and we believe that the influence of the Government has always been exercised in this direction. On the whole, we are of opinion that the same judicious control over the tariffs which has been exercised heretofore will probably bring about such ameliorations as are really necessary, and that this result will be further ensured by the future opening up of new lines of railway through which a sufficient degree of competition will gradually be established to prevent any serious evils in this direction.

Allotment of
wagons

24 Another point to which attention has been turned is the system of allotment of the wagons when the demand for freight in time of scarcity exceeds the powers of any line. Various suggestions have been made, but we are unable to support any departure from the simple rule that the railway traffic management should be left to settle this business without interference unless abuses arise, the general principle to be followed being that goods shall be accepted and despatched in the order in which they are brought to the railway stations. The Government has power to control the operations of the companies, and it has officers specially charged with the duty of supervision. In time of unusual pressure the vigilance of these officers should be increased to bring to notice any abuses that may arise, and to give to the railway officers every assistance that is possible in the discharge of their greatly increased and more anxious duties; and it may be desirable to add specially to the number of such supervising Government officers, just as is found necessary to strengthen other branches of the administration.

Storing sheds

25 The provision of additional temporary storing sheds for the protection of grain at or near stations where traffic accumulates, will often be a useful or necessary measure in the districts to which or from which an active trade springs up, and the cost of providing such accommodation might reasonably be shared between the railways and the municipal or other local authorities, according to the circumstances of each case.

Precedence to be
given to carriage of
food grain

26. We think also that in times of famine, when the traffic is in excess of the carrying powers of any railway, precedence must, with a view to the preservation of life, be given to food grains over other classes of traffic. During the famine of 1877 the distribution of wagons was at times such as to give an undue preponderance of the carrying power to other classes of goods. Great as may be the inconvenience experienced by merchants by such delay of their goods, it must, we think, be encountered in times of national emergency, and with a view to the public interest. It may be necessary to give legislative protection to the railway administration from liability to actions for damage on account of delay thus caused.

Co-operation for
purposes of through
traffic and police
arrangements

27. Constant care should be taken that the arrangements are complete between lines engaged in forwarding food to a famine area, for interchange of rolling stock and transmission of traffic and return of empty wagons, and not of a nature to produce confusion or delay under press of work, and the subject should receive vigilant attention so long as a heavy food traffic continues. Fraudulent practices of various sorts have arisen in connection with the allotment of wagons and the custody of grain in transit, and they should be energetically checked. It will doubtless be advisable that the supervision of all these duties should be entrusted to some active and experienced officer, who should be authorised, when occasion requires, to exercise the powers which Government may possess to control the action of the railway companies, or otherwise do what may tend most effectually to remove difficulties. The police arrangements of the lines will likewise require additional watchfulness, and it should be always borne in mind that every cause which is likely to lead to an interruption of the traffic must in such times be guarded against with increased care.

Appendix, No. 3.

PAPER handed in by Mr *Burkmyre*, 2 May 1884STATEMENT showing present and past RATES per Maund for GRAIN carried to *Bombay* by the Great Indian Peninsular Railway, and the Per-centage of Increase and Decrease on present RATES.

	Rates per Maund, January 1881.	Rates per Maund, January 1884	Per-centage Increase per Maund	Per-centage Decrease per Maund
			<i>Per Cent.</i>	<i>Per Cent.</i>
Jubbulpur	- 10 5	- 9 6		
Mirgang	- 10 5	- 9 6		
Sharpura	- 10 5	- 9 6		8 80
Chindward	- 10 5	- 9 6		
Rarkabel	- 10 5	- 9 6		
Nursingpur	- 10 5	- 9 6		
Kareli	- 10 3	- 9 6		7 82
Bokani	- 10 1	- 9 6		5 70
Gadawara	- 9 11	- 9 6		4 21
Mohapani	- 10 2	- 9 6		8 66
Babat	- 9 9	- 9 6		2 58
Bankheri	- 9 7	- 9 6		0 87
Piparia	- 9 4	- 9 6	1 78	
Sohagpur	- 9 2	- 9 6	3 63	
Semri	- 9 -	- 9 6	6 65	
Bagra	- 8 11	- 9 6	6 53	
Rampur	- 8 8	- 9 6	9 62	
Itarsi	- 8 7	- 9 6	10 68	
Dularia	- 8 5	- 9 6	12 87	
Dharam Kundi	- 8 4	- 9 6	14 00	
Sioni	- 8 2	- 9 6	16 32	
Pagdhul	- 8 -	- 9 6	18 74	
Timarni	- 7 10	- 9 6	21 28	
Harda	- 7 9	- 9 4	20 42	
Bhiringi	- 7 6	- 9 1	21 10	
Kirkian	- 7 4	- 8 11	21 58	
Harsud	- 7 2	- 8 8	20 92	
Bir	- 6 11	- 8 5	21 66	
Jawar	- 6 9	- 8 2	20 98	
Khandwa	- 6 6	- 7 11	21 79	
Nagpur	- 9 8			
Bori	- 9 8			
Sindi	- 9 8			
Paunar	- 9 8			
Wardh	- 9 8			
Degaon	- 9 8	- 9 6		1 72
Pulgaon	- 9 8			
Dhamangaon	- 9 8			
Chandur	- 9 8			
Badnera	- 9 8			
Karun	- 9 8			
Mauna	- 9 6	- 9 6	No increase	No decrease.
Murtajaphur	- 9 4	- 9 6	1 78	
Borgaon	- 9 1	- 9 6	4 58	
Akold	- 8 10	- 9 6	7 55	
Paras	- 8 7	- 9 6	10 68	
Amraoti	- 9 11	- 9 9		1 68

Appendix, No. 4.

PAPERS handed in by Major Gordon, 6 May 1884

STATEMENT X.

ABSTRACT ACCOUNT of the GOVERNMENT of INDIA for the Year 1882-83

REVENUE -		EXPENDITURE	
Receipts for Land Revenue, Opium, Salt, Army, and <i>all</i> heads other than Telegraphs and Public Works - - -	£ 56,525,234 [Item F]	Expenditure on account of Interest on Ordinary Debt, Opium, Salt, Marine, Police, Army, and <i>all</i> heads other than Telegraphs and Public Works - - -	49,751,483 [Item M]
Receipts from Telegraphs and Public Works - - - - -	13,599,997 [Item G]	Expenditure on working and maintaining <i>existing</i> Telegraphs and Public Works	15,657,789 [Item N]
TOTAL ORDINARY RECEIPTS } £	70,125,231	Expenditure on new works for the general improvement of the country, charged to Ordinary - - - - -	3,994,112 [Item O]
Balance, to be made good by borrowing -	3,943,265 [Item H]	TOTAL ORDINARY EXPENDITURE - } £	69,403,384
TOTAL - - - £	74,068,496	Expenditure on new works for the general improvement of the country, charged to Productive - - - - -	4,665,112 [Item R]
		TOTAL EXPENDITURE - - - £	74,068,496

STATEMENT Y

ABSTRACT ACCOUNT of the GOVERNMENT of INDIA for the Year 1882-83.

REVENUE		EXPENDITURE	
Receipts from Land Revenue, Opium, Salt, Army, and <i>all</i> heads other than Telegraphs and Public Works - - -	£ 56,525,234 [Item F]	WORKING ACCOUNT	£
Receipts from Telegraphs and Public Works - - - - -	13,599,997 [Item G]	Expenditure on account of Interest on Ordinary Debt, Opium, Salt, Marine, Police, Army, and <i>all</i> heads other than Telegraphs and Public Works - - -	49,751,483 [Item M]
TOTAL RECEIPTS - - - £	70,125,231	Expenditure on working and maintaining <i>existing</i> Telegraphs and Public Works	15,657,789 [Item N]
Balance, to be made good by borrowing -	3,943,265 [Item H]	BLOCK ACCOUNT	65,409,272
TOTAL - - - £	74,068,496	Expenditure on New Works for the general improvement of the Country	
		Charged to Ordinary - } £	
		Charged to Productive - } 3,994,112 [Item O]	
		Charged to Productive - } 4,665,112 [Item R]	
		TOTAL - - - £	8,659,224 [Item S]
		TOTAL - - - £	74,068,496

Appendix, No. 5.

PAPERS handed in by the *Chairman*, 16 May 1884LETTER from Mr. *Juland Danvers* to the Chairman of the Committee

Sir, India Office, S W, 16 May 1884.
 I AM desired by the Secretary of State for India to transmit to you, for the information of the Select Committee of the House of Commons on East Indian Railways, copies of two Memorials which have been recently addressed to the Government of India by the Bengal and Bombay Chambers of Commerce, on the subject of railway extension in India

I have, &c
 (signed) *Juland Danvers*,
 Secretary Public Works Department.

The Right Hon. W. E. Baxter, M P.,
 &c &c &c.
 House of Commons,

MEMORIAL of the Bengal Chamber of Commerce.

To His Excellency the Most Honourable the Marquis of Ripon, K.G., P.C, G.C.B.,
 G.M.S.I., Viceroy and Governor General of India,

The MEMORIAL of the BENGAL CHAMBER of COMMERCE, in General Meeting
 assembled,

Respectfully sheweth,

THAT in order to secure the adequate development of the maternal resources of India, it is essential to take more active measures towards generally improving the means of internal communication throughout the country, and especially by a more rapid extension of railways.

On this point your Memorialists feel that they need do no more than call your Excellency's attention to the following statistics published by the Financial Department of your Government; which show conclusively the steady growth of the imports and exports of the country, as the various districts have successively been brought into railway communication with the sea-board

	1869-70	1874-75	1879-80	1880-81	1881-82	1882-83
Railway mileage open - -	4,586	6,332	8,775	9,510	9,905	10,144
Imports of piece goods - yards	928,044,801	1,052,705,546	1,500,773,981	1,802,506,892	1,646,465,685	1,658,394,010
Imports of iron and steel - tons	90,670	*78,427	110,356	137,432	131,366	*179,686
Total imports - - value £.	32,927,520	36,222,113	41,166,003	53,116,770	49,118,374	52,095,710
Exports of wheat - - cwt	78,208	1,073,655	2,201,515	7,444,375	19,901,005	14,193,763
Exports of seeds - - "	4,879,784	6,074,756	7,246,182	10,303,776	10,482,512	13,147,982
Total exports - - value £.	52,471,376	50,359,240	67,212,363	74,560,602	81,968,451	83,485,122
State revenue - - - £	50,900,000	58,920,000	68,140,000	72,150,000	73,690,000	70,195,000

* This figure is incomplete.

Satisfactory as the progress has been, it is little to what may reasonably be expected in the future, it must not be forgotten how small a portion of the whole area of the country is at present served by the existing trunk lines, it being a fact that there still exists on the map of India a single block as big in area as the whole of France, within which there does not exist a single mile of railway.

Your Memorialists believe that no matter from what point of view the question of railway extension be considered, whether as regards the enhancement of the State revenue;

revenue, the general expansion of trade and commerce, the encouragement of manufacturing industries, both in India and England, the protection of the country against famine, the improvement in the social condition of the Indian peasant, or the education, in its broadest sense, of the whole of the natives of the country, the conclusion arrived at is almost certain to be the same, viz, that the whole community is closely and directly interested in the development of cheap communications in India, and in the expansion of commerce that undoubtedly follows directly additional outlets are afforded to the agricultural products of the country.

On the vexed question of gauge, your Memorialists may at once say that in the abstract they have no objection to the metre or any other gauge. They cannot, however, shut their eyes to the ever increasing volume of testimony as to the actual incapacity of the narrow gauge railways to carry the bulky products of the country in sufficient quantities, and they understand that the statistics which are compiled in the Railway Department show that on the average the cost of carrying a ton of goods, including interest on construction, is materially higher on the narrow gauge lines than on the broad. Both these considerations, the capacity for carrying bulky raw products, and the power of carrying such products at the lowest possible rates, most materially affect the development of the export trade of India.

What your Memorialists are unanimous in condemning is a break of gauge on a through trunk line. Letting alone the actual cost of transhipment, which of course has its influence on the rates quoted to the public, there is on the part of the whole commercial community a complete consensus of opinion that the vexatious delays at the junction, the uncertainty that exists as to the date on which the goods may be expected to require sea-freight at the port; the injury sustained from unnecessary handling, the loss of weight that invariably occurs during transhipment, and too often, the damage from rain or moisture, more than counterbalance any advantage the public may derive from the saving in the first cost of the narrow gauge lines. The Chamber of Commerce is strongly of opinion that all trunk lines, or connections of limited length between one broad gauge line and another, should be of the broad gauge, narrow gauge lines being confined to self contained areas of the country in which the traffic for many years to come is not likely to afford sufficient employment for a broad gauge line. It may be noticed that in the only cases in which metre-gauge lines have been constructed by Government, confessedly for State and not for commercial purposes, the inconveniences of a break of gauge were immediately recognised, and the Indus Valley and the Punjab Northern State railways were at great expense subsequently converted into broad gauge lines. Your Memorialists would wish to see the same evils recognised in the case of the commercial lines, and they therefore desire to express a wish that the question of the gauge to be adopted on the Indian railways may be brought for decision before the Select Committee of the House of Commons now sitting.

As regards the manner in which the capital required for railway extensions had best be raised, the Chamber of Commerce considers that no useful purpose would be served by their putting forward any definite suggestions. The desires of the Chamber begin and end with an extended system of railways, worked at the lowest practicable rates.

But generally your Memorialists would be glad to see the Government adhere to the economic principle of borrowing in the cheapest market, rupee loans being floated in India to no greater extent than can be absorbed in the country itself without injury to commercial undertakings. Subject to this general principle, the Chamber of Commerce consider it a matter of indifference where the railway loans are raised, as they are convinced, that on the whole, taking the bad lines with the good, the Government incur no real financial danger from investing in railways; the net earnings of the Indian railways as a whole returning a higher rate of interest than that carried by the Government loans.

In the matter of the most desirable agency to employ for the construction of the additional lines required, your Memorialists recognise that under purely State management, the public reaps the whole benefit of the surplus profits earned by the railways, and also that on State railways there should be a greater tendency to try experiments towards reducing rates and fares than in the case of lines that naturally have to be worked more in the interests of the shareholders than of the public at large. But allowing this, there are on the other hand all the evils arising from a want of continuity of policy, which practically seem inseparable from the conduct of Government business, and of which the present break of gauge in India is only too deplorable an example.

After careful consideration the Chamber of Commerce is of opinion that for many years to come the field will be large enough for both agencies to work in, side by side. While thus recommending the construction of railways by the agency of private companies, as well as by the State, the Chamber consider that in all cases where lines are given over to guaranteed companies either for construction, or for working, the interests of the public should be carefully guarded —

1st By Government retaining in their own hands the right of fixing maxima rates for the carriage of cheap staples.

And 2ndly. In the event of a line earning more than the guaranteed interest, by Government sharing with the company the surplus profits. As it appears to the Chamber that the tendency of private enterprise will obviously be to select the best paying lines, leaving the ones not so likely to pay for the direct construction of Government, the division between the Government and the Company of the surplus profits

profits seems an essential condition to the employment of private enterprise, for it is only in this way that the construction of railways can be committed to guaranteed companies without the railway system as a whole becoming a burden on the taxation of the country. In all cases Government should secure a share of profits in proportion to the risks entailed by the guarantee

Subject to these conditions your Memorialists see no objection to private companies being given a continuous guarantee, and they consider that without such a guarantee sufficient capital for the railway extensions required by the country will not be attainable.

While on the subject of private enterprise, your Memorialists would venture to suggest that the Select Committee be requested to consider whether rules might not be formulated, describing the terms on which Government was prepared to encourage the construction of railways in India by private enterprise; and so avoid the vexatious and avoidable delays to which promoters of railways in India have hitherto been subjected

Your Memorialists think it is highly advisable that certain general principles and a certain limited scope of railway extension should be sanctioned by the Secretary of State, that within these limits the Government of India should be empowered to deal finally with all railway schemes as proposed, and that selected members of the banking, commercial, and trading communities (with mere consultative functions), whose financial experience would be available in dealing with railway schemes proposed in different parts of the country should be associated with the Government. The appointment to the Council of the Secretary of State for India of a greater proportion of members representing the trade and commerce of the country also appears to the Chamber of Commerce to be desirable.

In conclusion, your Memorialists pray that as the questions herein referred to are of the utmost importance to the welfare of Her Majesty's subjects both in India and in England, they may receive your Excellency's earnest and careful consideration.

MEMORIAL of the Bombay Chamber of Commerce.

To His Excellency the Most Honourable the Marquis of Ripon, K.G., P.C., G.C.B.,
Viceroy and Governor General of India in Council,

The MEMORIAL of the BOMBAY CHAMBER OF COMMERCE in
General Meeting assembled,

Respectfully sheweth,

THAT the active prosecution of railway construction in India, on a far larger scale than has yet been contemplated, is of the utmost importance to the country, and demands immediate action on the part of your Excellency's Government.

2. That the efforts made in recent years to meet the growing wants of the country in respect of railway extensions have proved inadequate, that in the interests of the people and of commerce, a policy involving a much larger expenditure on railways is necessary; that such expenditure would serve to bring under cultivation vast tracts of land now lying waste, thereby swelling the land revenue, that, by it, the capabilities of India to compete with other countries in supplying with produce the consuming markets of Europe would be immeasurably augmented, and the prosperity, welfare, and convenience of the people promoted and increased.

3 That your Memorialists therefore desire respectfully to submit their views on the trade and capabilities of India, the manner in which, in their opinion, the capital required for railway extensions should be raised, and the policy which might, with great advantage to the country, be pursued in the construction and management of railways

4 Since the introduction of railways into India in 1852, the foreign export and import trades of British India have increased from 38,422,100*l* in that year to 150,078,815*l* in the official year ending 31st March 1883, when 10,317 miles of railway were open. Considering the difficulties of introducing new industries into foreign markets, and the excessive rates of carriage charged by railway companies having a monopoly of the districts which they serve, the increase may be regarded as satisfactory. It is, however, far short of what it would have been had a more liberal policy been adopted by the Government in regard to railway extensions, and by the railway companies in the matter of rates. It is only quite recently, when the great producing districts were to some extent reached and facilities given for the carriage of grain to the coast, that the country has begun to reap the benefit of railway communication. As an instance of the good which has already been done, and of the capacity of the country for developing new and great industries, the Indian wheat trade may be cited. Virtually, it began in 1872-73, when the export was 297,308 cwts., it rose in the year ending 31st March 1882 to 19,863,520 cwts, and in the eight months ending 30th November 1883 to 17,708,194 cwts. During the earlier portion of this period the export of wheat was

Development of
wheat and seeds
export trades.

but tentative, the quality of the article being unknown. Its quality is now, however, as well known in the markets of Europe as the wheat of other countries. The export of it, therefore, depends now entirely upon prices, and it is reasonable to assume that if adequate facilities in the shape of railway extensions and of low rates of transport from the producing districts to the coast were afforded to the trade, to enable it to meet the lower prices ruling in Europe owing to the pressure of competition, a vast increase in the export of this article would result.

Capability of increased production.

5 The Government of India, in a recent estimate of the area under wheat cultivation in India, came to the conclusion that the present area was about 19,329,200 acres, yielding on an average from eight to 13½ bushels an acre, or about 26½ million quarters, that is, 15½ million quarters in excess of the whole requirements of England. And in treating of the capability of increased wheat production in India, in para. 168 of the Financial Statement for 1883-84, they say "Some high authorities are of opinion that under favourable conditions as to the prospect of a market, it would be possible within a few years to double the amount of wheat available for export, that is to say, to increase it to about 40 million cwts. There can be no doubt that very large quantities of land are awaiting cultivation, especially in the Punjab, Burma, Assam, and the Central Provinces. In the eastern districts of the Central Provinces the new lines of railway will open out a very large tract of wheat-producing country, which up to the present time has been unable to find a market for its surplus produce, owing to defective means of communication." In para 167 of the Financial Statement, the present total yield of wheat in India is taken at about 6½ million tons, of which it may, it is added, be roughly said that about 1,000,000 tons are available for export. If to this present yield we add the further 6½ million tons, which the country is capable of producing, and which would with increased railway facilities ere long be produced, we arrive at a total yield of 13 million tons, of which, according to the above estimate, only two million tons would be available for export. Your Memorialists, however, totally dissent from the view that out of this vast yield only two million tons would be available for export without trenching on the food supply of the people, for it is a well known fact that the consumption of wheat in India is not large, the bulk of the inhabitants subsisting on cheaper staples. On the contrary, they believe that a very large proportion of the total yield would be exported, and the requirements of England, as well as a large quantity of the wheat required by the Continent, would ere long be supplied by India alone if the producing districts were opened out, and cheap communication between them and the coast established. No trade has ever yet acquired such imperial importance in India, and, aided by railway extensions into the producing districts throughout the country, no limit can be assigned to its increase. The trade in seeds has also, since the introduction of railways, very largely increased. During the last 10 years the export of seeds from British India has risen from 2,779,283 cwts. in the year ending 31st March 1873 to 13,129,431 cwts in the eight months ending 30th November 1883, and like that of wheat, this trade is only awaiting the opening out of producing districts for its further development.

United States and India

6 These instances will, your Memorialists trust, serve to convince your Excellency of the pressing necessity which exists for the inauguration of a policy which will provide India with railway facilities on a scale as large as that which now exists in the United States, and which, in a few years, has raised that country to an unexampled height of prosperity. The two countries are both mainly agricultural in character. The acreage available for further tillage in both may be described as practically unlimited, requiring only railway communications to bring it under cultivation. The United States is the most formidable rival with which India has to compete for the supply of wheat to the markets of Europe. Yet the railway system in America has been extended so rapidly during the last few years that there are now no less than 120,000 miles of railway, while in India only 10,317 miles are open. The exports of wheat from the United States in the year 1881 amounted to 36,083,488 cwts, while the exports from India in 1882 did not exceed 19,863,520 cwts. India is more distant from the consuming markets of Europe, but she can produce wheat more cheaply than America; the quality of Indian wheat is equal, if not superior, to American; it only requires additional facilities of transport in India to bring about a reversal of the relative export positions of the two countries.

Effect of railway extensions on import trade.

7. It is, however, not only in the development of the country, and consequently of the export trade, but also in the expansion of the import trade of the country, that railway extensions are of such supreme importance to India. The trade returns of British India show that every increase of facilities for trade, by means of extended railway communications, has been attended with an increased demand for European manufactures. In the year 1852-53, when railways were first opened, the imports of merchandise amounted to 10,070,861 £; in 1872-73, when 5,671 miles of railway were open, to 31,875,000 £, and in 1882-83, when 10,317 miles were open, to 52,098,670 £; and it must be borne in mind that these values do not by any means adequately represent the increase in quantities, as during the last 30 years prices have steadily declined.

Lines of railway urgently required.

8. The lines which are more immediately needed throughout India have no doubt received the careful consideration of the Government of India, and your Memorialists desire respectfully to urge that the construction of them should be taken in hand at once and vigorously prosecuted. Such of the lines recommended in the Report of the Indian

Famine

Famine Commission as have not yet been sanctioned will also, it is hoped, receive your Excellency's early attention. But the lines of railway in which the communities of this Presidency are more particularly interested, and which the Chamber of Commerce has urged upon Government, are of equal, if not greater, importance than any other lines in the country, and your Memorialists respectfully submit that their immediate construction on the broad gauge should be undertaken. These lines are.

1 The extension, on the broad gauge, of the Bhopal State Railway through Lalitpur and Jhansi to Gwalior, with a branch from Jhansi to Cawnpore. The necessity and the great importance of the immediate construction of this line, not only in the interests of commerce, but as a protective line to Bundelkand, which is subject to periodical drought, have been set forth in the Memorial addressed on the 21st November last by the Chamber of Commerce to Her Majesty's Secretary of State for India, copies of which were also forwarded on the same day through the Local Government to the Government of India.

2 The construction, on the broad gauge, of the Jhansi-Manickpore Railway, which would be connected at either end with broad gauge lines. This work, which lies in the heart of the broad gauge system, was recommended by the Famine Commission, but your Memorialists believe that that it would be a locally remunerative work, as the country in favourable seasons yields luxuriant crops of cereals and cotton, and that, moreover, a large through traffic would pass over it.

3 The construction on the broad gauge of a line connecting Nagpur with Calcutta. This line is doubtless one of those referred to by the Honourable Sir Evelyn Baring in para 168 of the Financial Statement for 1883-84, wherein he observed—"In the eastern districts of the Central Provinces the new lines of railway will now open out a very large tract of wheat-producing country, which, up to the present time, has been unable to find a market for its surplus produce owing to defective means of communication." It is believed that, when these districts are opened out, an immense quantity of wheat, estimated in some quarters at 5,000 tons per diem, will pass over this line, a large portion of which will come to Bombay, and your Memorialists most earnestly urge that, considering the nature of the traffic, the exigencies of the trade, and the fact that the line will be connected at Setarampore with the East Indian broad gauge railway, and with the Great Indian Peninsula broad gauge system at Nagpore, the Government of India will not permit the error which was made in constructing the Rajputana Malwa line from the Sabarmati to Agra and Delhi to be repeated in this case, and that the present Nagpore-Chattisgarh line, or any portion of it which may form part of the Nagpore-Bengal scheme, will be taken up and reconstructed on the broad gauge.

4 The construction on the broad gauge of a line connecting Godra with Rutlan, which from the certainty of a large local and through traffic would, there is reason to believe, be a highly remunerative work, to say nothing of the great benefit which would accrue to the State, as well as to the people, from the opening up of the districts themselves and of direct communication between Central India, Guzerat, and Kathiawar.

9. Your Memorialists, in urging the construction of these lines on the broad gauge, are not concerned to dispute the fact that the metre gauge is capable of carrying a considerable amount of traffic, nor are they disposed to deny that in an extensive country like India, with population unequally distributed, and large tracts of land comparatively unproductive, lines of railway constructed on that gauge may amply provide for the local wants of particular districts. Broad and metre gauges.

10 They deem it, however, equally indisputable that all districts where population is considerable, and the land capable of producing large crops for export, would be more effectively served by the broader gauge, and that such districts should be connected with the port through which their trade and produce pass by continuous main lines of the same gauge and carrying capacity, thus reducing delays in transit and the cost of transport by rail to a minimum.

11. Your Memorialists are well aware that the reduction in prices of materials required for construction of railways that has taken place during the last 25 years renders to an important extent the cost of the older lines in this country practically no guide in now estimating the probable cost of new lines on either gauge, while the facilities afforded by the existing lines for the transport of necessary material, and the experience gained in their construction, are further valuable aids to economy in extending the present railway resources of India.

12 It is for engineers to say what is the comparative cost of the first construction of any particular line on the metre and the broad gauges, but in the same locality the first difference is presumably in favour of the narrow gauge. Distinct data are not available for definite comparison, but your Memorialists consider that there are fair grounds for questioning whether, in any given case, the additional rolling stock, and the greater length of siding, terminal and train-crossing accommodation necessary to develop and work a considerable traffic satisfactorily on a metre gauge line, would not ultimately largely absorb the saving effected on its first construction in comparison with a broad gauge line of equal capacity.

13 Appended to this Memorial is a comparison (marked A) of the results of the working of the Rajputana-Malwa metre gauge line with the B B and C 1 and other broad gauge lines to which your Memorialists respectfully request the favour of your Excellency's attention. It is there shown that if the metre gauge goods trains had carried the same average paying loads as those on the broad gauge lines, the total train mileage would have been greatly reduced, with a very large consequent reduction of expenditure, amounting to no less than 6,95,477 rupees. And the writer adds —

"A saving of 6,95,477 rupees per annum represents, at 1s 8d exchange, £7,956 1 sterling, which would more than meet the interest at 3½ per cent upon a loan of "1,650,000 1 sterling, which it is believed would go far towards meeting the net cost of "the conversion of the Rajputana lines now open from the metre to the broad gauge, "and thereby place them on the same footing as the connecting lines on all sides, to the "advantage of the public and without disadvantage to the State, as the fresh outlay to "be incurred would be mainly covered by revenue now existing, and which, if not thus "saved and applied, must continue to be expended on the working of an inferior system "of transport."

14 Other memoranda (marked B and C), which deal with the relative cost of rolling-stock on broad and narrow gauge lines, and with the cost and other inconveniences of transshipment at a break of gauge, are also appended hereto, for your Excellency's information.

15 These details, relative to the results of the working of the broad and narrow gauge railways, and to their relative cost, have been furnished by eminent practical authorities, and your Memorialists desire now to submit an account of the experience of the trade at Nagpur, where there is a heavy wheat traffic, showing the drawbacks attending the break of gauge, supplied by a leading firm in the trade, which has agents at that station. Similar evidence is also available with respect to the break at Sabarmati —

"1 The usual delay in transshipping goods of all descriptions is fully 24 hours "from arrival to departure of goods, when the traffic going on at the terminus is not "on a large scale, but during the busy season this delay is prolonged by two to "three days, and a great deal of trouble has to be taken to move the goods.

"2 The expense of transshipment is not very material, as the trade is only "charged 9 pies per ton on this line, and taking the total arrivals from the State "Railway at about 200,000 tons per annum, the loss incurred to the trade is about "9,000 rupees per annum upon a value of nearly 200 lacs of rupees. The loss also "incurred in interest by the delay is no more serious.

"3 But there is a very material loss to the trade by the damage and loss in "weight caused in transshipping. The goods are roughly handled by the workpeople "and a portion of the bags are burst in consequence, and they further lose weight "through being exposed on the platform to the sun, especially during the hot season " (which is the busiest of the year), for two and three days. During the monsoon also "there is often a good deal of damage caused by the rain. The loss from these "causes our agents estimate at about 1 per cent at the very least, or say over "2 lacs of rupees per annum. The mischief, however, done by the break of line is "very inadequately represented by this loss in money, as it is a well known fact that "the competition of Indian wheat with American is now so exceedingly close that a "much smaller margin than 1 per cent. would turn the scales against India, and "cause much less business to be done by the agriculturists, the railways, the "merchants, the freight-owners, &c, &c.

"It may also be mentioned that the above estimated loss of over 2 lacs of "rupees is only incurred at one break-point, but if the narrow gauge system were "extended to many parts over India, the direct loss to the country arising from "narrow gauges would come to a very considerable figure."

16 The objections to a break of gauge on main lines of communication are, your Memorialists submit, not limited to the delays, the expense of transshipment, and the damage to goods and loss of weight, but they are seriously felt in times of trading pressure, while in times of military necessity they present obstacles that may lead to public disaster. In the widest interests of the public, therefore, whether as traders or simple members of the State, your Memorialists deem it most desirable that the metre gauge lines, and the breach of through continuity of transport that they inevitably cause, should be strictly confined to districts aside from the main lines of communication between the principal ports of the country and its great inland producing districts. They would, moreover, respectfully submit that, when it can be shown that the most effective mode of through transport can be provided practically without extra expense to the State, it becomes a duty of Government to ensure, where it has the control, the introduction of the best system.

17 The object your Memorialists have in view, and in advocating which they feel sure that they are only supporting the views, and concurring with the wishes of Government, is to get the resources of the country economically and profitably developed, and the public

public funds of the State usefully applied, deeming a judicious administration of the latter, cannot fail to bring great gain to India, and proportionate benefit to its people, as well as to those engaged in carrying on its external and internal trade and commerce

18 Your Memorialists are aware that the difficulty which prevents the prosecution of railways on the scale indicated above is the disinclination of Government to increase its sterling loans. Private enterprise offers capital, the interest on which is to be guaranteed in sterling, thereby throwing on Government all the risks of subsequent falls in exchange. Government, on the other hand, in order to eliminate this element of uncertainty in its finances, and to adhere to the principle that all further liabilities of India be contracted for in the currency of the country, stand out for rupee loans or capital, the interest on which they guarantee in rupees

Disinclination of Government to increase its sterling loans

19 It is doubtless apparent to the Government of India that the construction of railways to the extent of 2,000 to 3,000 miles annually for a period of 10 years, involving an expenditure of about 20 millions sterling per annum, although at first sight apparently large, is not more than enough to meet the minimum requirements of the country, and ensure the steady and successful development of its resources. Your Memorialists are of opinion that the amount needed can only satisfactorily be raised in London, and in sterling loans, and that it is only waste of time to consider whether it could be raised in rupee loans in India, where, owing to the withdrawals of floating capital within the past three or four years for purposes of industrial enterprise and extended trade, as well as to the successive loans that have been annually floated, the investing power of the country has become well nigh exhausted, and Government securities as a natural consequence seriously reduced in value. The fall in Government paper within the last three years is quite 10 per cent. This is no doubt owing, in some measure, to the lower level of sterling exchange, and to the disturbing fluctuations of silver securities generally, but your Memorialists believe that it is more especially due to the causes above mentioned. Five per cent of this fall has taken place within the past few months, and has been brought about by scarcity of money in India, combined with the apprehension of further loans being shortly announced. The value of Government paper never stood higher than it did during Lord Northbrook's administration when few loans were issued. The attempts which have since been made to issue large loans in India have never been successful. The conversion of the ten-crore 5½ per cent. loan into a 4½ per cent. loan in October 1878 was a failure, and the notification of the five-crore 4½ per cent loan in May 1879, although the minimum rate was fixed at this low figure of 94, resulted in four crores only being taken up. It has been suggested that the amount required annually for railways might be obtained by the issue in India of Guaranteed Railway Bonds bearing interest at 4½ per cent per annum, and showing excess profits, but it appears to your Memorialists that even with these inducements a very small sum, probably not more than 2½ crores annually, could be issued, and for a few years only, and at low rates, and that as it would have the effect of lowering the price of 4 per cent. Government Paper, the proposal should not be entertained. They would further beg to draw the attention of your Excellency to the fact that each fresh issue of rupee loans in India has the effect of causing a serious advance in the value of money in the local markets, thereby bringing loss and inconvenience to all who are engaged in commercial pursuits

Expenditure of 20 millions annually on railways required.

Can only be raised in London, and in sterling loans.

20 Your Memorialists while of opinion that the absorption of capital into private enterprise during recent years, in conjunction with the successive issue of annual loans in India, has greatly reduced the funds available for investment in Government Securities, thereby adversely affecting their value, consider that the credit of Government was never better than at present, which would be at once made manifest did they seek to raise money in London.

21 Your Memorialists believe that all the money required by the Government of India for the construction of State railways could be obtained in London in sterling loans at 3½ per cent interest in perpetuity, which could, similarly to Consols, be redeemed in the market at the pleasure of the Government, as their finances permitted, and that private enterprise, aided by a guarantee of 3½ per cent. sterling in perpetuity, and sharing the excess profits, would come forward to supplement the efforts of Government to construct the lines required by the country, and they therefore venture respectfully to urge sterling loans upon the Government, not only as being the more economical, but as being the only prudent course open to them to obtain the money necessary to construct railways on the required scale. While the sterling loans, or guaranteed 3½ per cent. railway stock would be taken up in London at or about par, it is improbable that rupee 4½ per cent loans issued in India could be floated at a higher rate than 90 rupees per cent, and there is much good reason to doubt the realization of even 90, so that the sterling operation would result in a saving in the first instance of perhaps 10 per cent or more in the principal, and of 1 per cent in interest, this gain in interest varying with future fluctuations in exchange. With these great savings in hand, your Memorialists feel that Government may, without anxiety, face the uncertainties of the silver market and of exchange, and they desire in this connection to point out that nothing could possibly tend more to steady and strengthen exchange in the future than the raising of loans in London in the manner suggested. The diminution of Council drawings during the years of construction would enable India comfortably to absorb any surplus of silver likely to be available in Europe, and, when the lines have been completed and are at work, the increase of exports would

Sterling loans recommended.

Effect on exchange.

would immediately create a balance of trade so much in favour of India that the resumption of full Council Drawings, *plus* added interest for new lines, would not do more than check for a while the further advance in exchange. Should, however, exchange decline, the fall would be more than made up by profits accruing from the extension of railway business.

Principles and rules for construction and regulation of the railway system.

22. Having now stated their views as to the lines which are the more urgently needed in Central and Western India, and the manner in which the capital might best be raised, your Memorialists desire respectfully to suggest that the following principles and rules should be laid down for the construction and regulation of the railway system in India :—

(1) That every possible economy should be exercised in order that a larger portion of the ordinary revenues of the empire may be made available for the development of railway communications.

(2.) That, in all future agreements with guaranteed companies, the following stipulations should be inserted.—

(a.) Government to have a moiety of the excess profits over guaranteed interest in perpetuity.

(b) Government to have the absolute right to fix rates and fares, and from time to time to alter the same.

(c.) Government to have some security against extravagant expenditure.

This might be done by agreeing that the control of the expenditure on construction rest with the Government.

(3) That no concession of any kind should be granted to promoters of Companies which are not guaranteed, unless the absolute right to fix rates and fares, and from time to time to alter the same, is vested in Government.

(4) That all existing lines, whether guaranteed or not, and all future lines, whether under the control of the Government or not, shall be bound under the severest penalties to maintain their respective lines in a state of thorough efficiency, and to keep themselves supplied with rolling stock equal to the heaviest traffic expected.

(5) The necessity for such a rule being rigidly insisted upon is apparent from the deficiency of the rolling-stock on the G I P. Railway, and the injury done thereby to the interests of India, which were set forth in a letter addressed by the Chamber of Commerce to the agent of the G. I P Railway Company, dated 17th October 1883, copies of which were forwarded, through the local government, to the Government of India, and to the Secretary of State for India. The line last season was absolutely blocked, there being upwards of 250,000 bags of wheat on the line, which the company admitted they had not engine power to remove, and the leading firms in the wheat trade reported that their purchases in the interior were not nearly so large as they had anticipated, owing to the insufficient working power of the G I P. Railway Company's line, as during the height of the wheat season they were obliged to stop purchases against orders, "so as not to have unduly large stocks lying exposed at the railway stations, whence they could not be transported by the railway company owing to want of wagons and other causes."

(6.) That as the greater part of the *whole* earnings arising from the construction of branches appears, not in the accounts of the branch line, but in the accounts of the main line, the construction of branches should be generally given to the companies whose lines they feed, by an extension of the guaranteed capital, at the lowest rate of interest. In any case the strict ruling of the Secretary of State regarding the application of loan funds only to lines which will in themselves be productive in a few years, apart from the main lines with which they are connected, should not be applied as respects the construction of branch lines

(7) That clear rules should be published for the guidance of railway promoters in India, somewhat similar to the Standing Orders of the Houses of Parliament, and some system introduced to avoid the inordinate delay in obtaining a decision with regard to proposed railways :—and,

(8) That the Government of India, who are the proper judges of the merits of a line, and the nature of its traffic, should in all cases determine the gauge on which a railway is to be constructed

Suggestion of the Chamber of Commerce that a Special Commission be appointed with-drawn.

23 Your Memorialists further request that the suggestion of the Chamber of Commerce, in their letter to the Government of India, in the Public Works Department, dated 5th December last, that a Special Commission should be appointed to consider and report on lines of railway needed, and to be undertaken, which was made with the view of avoiding the delay which seemed to them to be inseparable from a reference to a Select Committee of the House of Commons, may be withdrawn on the ground that any disagreement in minor

minor matters between the recommendations of the Commission and the views of the Government of India now under consideration at home, might furnish another excuse for further procrastination.

In conclusion, your Memorialists pray that as railway extensions, on the scale suggested, would be of immense benefit to the country and to the commerce of India, the whole subject, and the views herein set forth, may receive your Excellency's immediate and favourable consideration

And your Memorialists, as in duty bound, will ever pray.

For and on behalf of the Members of the Bombay Chamber of Commerce,

Chamber of Commerce, Bombay,
11 February 1884.

(signed) *F. Forbes Adam*, Chairman.
J. Gordon, Secretary.

APPENDIX A

RESULTS of the Working of the GOODS TRAFFIC of the RAJPUTANA-MALWA METRE GAUGE RAILWAY, compared with that of the B. B. & C. I. and other BROAD GAUGE RAILWAYS.

(From a communication addressed to the Chamber of Commerce)

THE Rajputana-Malwa line, according to the statements given in Colonel Stanton's report to the Secretary of State for India in Council for the year 1882-83, required in 1882, in order to carry 130,807,716 tons of goods one mile, which is equivalent to carrying 117,211 tons over its whole length, 4,914 waggons, while in like manner the G I P railway carried 376,726 tons with 7,815 waggons, and the B B. & C I. Railway carried 293,742 tons with 2,888 waggons.

While, therefore, every wagon on the B. B. & C I Railway carried 102 tons over the whole length of that railway during the year, and similarly on the G I P line every wagon conveyed 48 tons, on the Rajputana-Malwa Railway the year's work of each wagon was represented by 24 tons of goods conveyed over the whole length of the line. Judged in the same way the effective work of each wagon on the East Indian Railway for the year was represented by 78 tons conveyed over the whole length of that railway. The comparative value of the work done by each goods wagon on the lines named during the year 1882 was, consequently, when stated in tons hauled one mile, as follows, viz —

	Ton Miles of Goods carried.
East Indian (Broad Gauge) - - - - -	$78 \times 1508\frac{1}{2} = 117,507$
G I P „ - - - - -	$48 \times 1446\frac{1}{2} = 69,444$
B B & C I „ - - - - -	$102 \times 461 = 47,022$
Rajputana (Metre Gauge) - - - - -	$24 \times 1116\frac{1}{2} = 26,790$

The direction in which the traffic preponderates on each line considerably affects a comparison of this nature, as the empty back running depends thereon, but during this period the Rajputana line was understood to be not so well supplied with rolling stock as at present, so that it may be presumed the stock available was used to the best possible advantage

Similar results are indicated by the average loads carried in goods trains, for, while the average load on the East Indian Railway was 166 tons, on the G I P Railway (whose trains have to be split up in passing the ghauts) 98, and on the B B & C I Line 147 tons (the general average on all three lines being 134 tons), on the Rajputana Railway it was 61 only

Making all due allowances for unavoidable differences, it is evident from these figures that the metre gauge is far below the broad gauge in economical carrying power, as to move an equal weight of traffic requires on the former a much greater number of trains than on the latter, and thus involves a greatly increased expenditure on locomotive power, without compensating advantages beyond a questionable, and at best a limited, saving in first cost of construction and equipment.

The practical result, as shown in the same report, is that, while the broad gauge East Indian Railway, with exceptional advantages in cheap fuel, can haul its trains at an average cost of 0.49 rupees per mile run, and the haulage cost on the broad gauge G. I. P. and B. B. & C. I. Railways did not exceed 0.75 rupees and 0.83 rupees per mile respectively, the metre gauge Rajputana line trains cost 0.68 rupees, though they carried only 45 per cent of the average loads on the other three lines thus compared.

The total aggregate train mileage, of both goods and passengers trains, run on the East Indian, the G. I. P., and the B. B. & C. I. lines in 1882 was, according to Colonel Stanton's report, 18,919,895 miles, costing 39,543,746 rupees, the average cost per mile being approximately 2.09 rupees on those lines, of which locomotive power represented 0.63 rupees, and maintenance of way, works, and stations 0.67 rupees.

On the Rajputana line, the total train mileage actually run was 3,744,254 miles, at a gross cost of 5,800,377 rupees, or an average of 1.55 rupees per mile, of which 0.68 rupees was for locomotive power, and 0.34 rupees for maintenance of way, works, and stations.

The difference (amounting to 0.33 rupees per train mile) in maintenance charges is due, partly to the heavier character of the works to be maintained on the three broad gauge lines named, and partly to their greater age, which involved heavier outlay in comparison with the metre gauge Rajputana line. If it be deducted from the former, the comparative cost of working the broad gauge lines, and maintaining them on the same scale of expenditure as the metre gauge lines, would stand as follows, viz —

		Average Cost per Train Mile
East Indian	- - - - -	
G. I. P.	- - - - -	
B. B. & C. I.	- - - - -	
Rajputana Metre Gauge	- - - - -	1.55
Nominal difference per Train Mile in favour of the Metre Gauge		0.21

But if the metre gauge goods trains had carried the same average paying loads as those on the broad gauge lines (134 tons), the goods train mileage for the traffic carried upon it need only have been 977,303 miles instead of 2,146,863, and the total train mileage would thus, even leaving the passenger train mileage unaltered, have been reduced from 3,744,254 to 2,574,694 miles, with a very large consequent reduction of expenditure.

In estimating the probable cost of working this reduced goods train mileage on the broad gauge, it is assumed that it would be fair to allow certain additions amounting to 1.14 rupees per train mile to the reported average cost of the smaller narrow gauge trains.

Those additions are detailed and explained in the note appended hereto.

<i>Notes.—</i>		Rs.
(a)	For Locomotive power, 1 rupee instead of 0.68 rupees	0.32
	This allows fully for the steeper gradients and dearer coal of the R. M. Railway, and is 20 per cent in excess of the average cost on the B. B. and C. I. Railway, whose goods trains carry 147 tons, or 18 tons more than the average of the three broad gauge lines referred to.	
(b)	For Traffic Expenses, 0.37 rupees, the B. B. and C. I. average, instead of 0.23 rupees, the R. M. average cost.	0.14
(c)	For Maintenance of Way and Works, which costs on the R. M. Railway 0.34 rupees, and for carriage and wagon expenses, which cost on that railway 0.11 rupees, together 0.45 rupees, an increase in the proportion of the increase in assumed average load, or, say, from 61 to 134, making it 0.99 rupees for both services.	0.54
(d)	For General Charges, 0.31 rupees, the B. B. and C. I. average, instead of 0.17 rupees, the R. M. average cost.	0.14
Total addition per goods train mile - - - Rs.		1.14

The expenditure, leaving aside possible reductions in the passenger train mileage and cost, on working the Rajputana Line traffic in the year under notice would then have stood as follows, viz :—

(1) <i>Passenger Train Service</i>	Rs
1,597,391 train miles at 1 55 rupees per mile - -	24,75,956
(2) <i>Goods Train Service</i>	
977,303 train miles at 2'60 rupees per mile - -	26,28,044
Total, being 19 8 rupees per mile on 2,574,694 train miles	51,04,900
Actual Expenditure - - - - -	58,00,377
The Saving Representing - - - - -	Rs 6,95,477

Further reductions of expenditure would no doubt have been also attainable in connection with the passenger traffic, but, leaving these out of the question, for the present, the figures given above appear to show conclusively that a large saving would have attended the working of the goods traffic of the Rajputana Metre Gauge Railway in 1882 had it been worked on the broader gauge of the three lines with which it has been placed, at some length of detail, in comparison.

A saving of 695,477 rupees per annum represents, at 1 s 8 d Exchange, 57,956 l. sterling, which would more than meet the interest at 3½ per cent upon a loan of 1,650,000 l. sterling, which would go far towards meeting the net cost of the conversion of the Rajputana Lines now open from the metre to the broad gauge, and thereby place them on the same footing as the connecting lines on all sides, to the advantage of the public and without disadvantage to the State, as the fresh outlay to be incurred would be mainly covered by revenue now existing, and which, if not thus saved and applied, must continue to be expended on the working of an inferior system of transport.

The further consideration of this question is urged upon the practical attention of Government.

The Rajputana Metre Gauge Line has been chosen for the purposes of this comparison, because it is at present the largest and most important of the State railways, and because its working presents a strikingly illustrative example of the relative economy of the broad gauge, where a considerable traffic has to be conducted

APPENDIX B.

MEMORANDUM as to Relative Cost of ROLLING STOCK ON BROAD and METRE GAUGE RAILWAYS.

(From a communication addressed to the Chamber of Commerce)

As regards the question as to the relative cost of rolling stock, I think that when this is considered in connection with railways only worked to the extent that railways usually are in India, and particularly to single line railways, the relative cost of rolling stock is not a very important factor as regards the ultimate cost of such railways, although I hold that the relative cost as compared with tons moved is very much in favour of the broad gauge stock, still on comparatively light-worked railways the total cost of rolling stock forms a very small per-centage of the total capital outlay.

The following table shows the mean cost of the various classes of vehicles, as compared with modern broad gauge stock —

	Broad Gauge	Narrow Gauge
	Rs	Rs
Locomotives, each - - - -	31,000	22,666
Carrriages „ - - - -	3,800	3,063
Wagons „ - - - -	1,800	1,333
Brakes „ - - - -	2,600	2,663

The power of locomotives for goods traffic is, in a great measure, dependent upon their weight. An average narrow gauge engine weighs rather less than half that of a broad gauge engine, although the estimated cost in the above table is in about the proportion of two to three. The same proportion will probably hold good as regards the carrying capacity of the vehicles. It is true that narrow gauge railways are putting a very large tonnage in their wagons; whether it is economical to do so or not will have to be decided by experience, they however have the advantage of only running at very slow speeds. It should be noted that although it takes twice the quantity of narrow gauge stock (at the relative cost per unit of two to three) to move the same freight as broad gauge stock, this is moved at a much slower speed, for which an additional allowance should be made, not only for rolling stock, but for crossing stations, sidings, &c.

2. The relative quantities of rolling stock in the G. I. P. and Rajputana Railways is taken from Government statistics for the half year ended June 1882, and is as shown below, also the train mileage run —

STOCK.	G. I. P.	Rajputana
Engines - - - - -	440	285
Wagons - - - - -	7,815	4,554
Train miles run - - - - -	4,791,394	2,086,000
Miles of railway - - - - -	1,448	1,116

It will be noted that whereas the Rajputana ran much less than half the train mileage of the G. I. P., their engine stock, at the estimated price given above, would cost nearly half the money, although the power of those engines to move loads was certainly not more than half that of the G. I. P., and even then the loads would be moved at probably not much more than half the speed.

The same conditions would hold good as regards all other classes of the stock.

3. You have probably obtained information from another source as regards other items of expenditure, but in connection with rolling stock, I think the subject of bungalow accommodation for workmen is worth attention. Not only do narrow gauge engines cost more than those of the broad gauge in proportion to tons hauled, but they require engines, drivers, &c., in proportion of two to one, so that assuming that a driver and two firemen occupied one small bungalow between them, two bungalows at from 3,000 to 4,000 rupees each would be required on the narrow gauge as compared with one such bungalow for the same amount of freight hauled on the broad gauge.

4. As regards workshops, running sheds, machinery, &c., the cost for narrow gauge engines would certainly not be less than two-thirds of that required for broad gauge engines, but as two narrow gauge engines are required to do the work of a broad gauge the cost per work done would be at least a third greater on the narrow gauge.

Government statistics for June 1882 give, —

	G. I. P.	Rajputana.
	Rs.	Rs.
Cost per 1,000 - - - - -	—	—
Gross tons moved - - - - -	7 59	9 44

In dealing with the above figures the heavy gradients of the G. I. P. should be considered, also that fuel on the Rajputana cost more per ton than the G. I. P., that the narrow gauge is a new railway and has not yet incurred its maximum charges for maintenance of permanent way and rolling stock, and I believe the narrow gauge is a more uniform up and down traffic.

5. As regards permanent way, of course the broad gauge permanent way material costs more, but the difference need not be so great as it usually is, because it would be possible to lay the broad gauge with the same weight of rails as the narrow gauge, although I do not think anyone would ever suggest doing so. I refer to this to show that anyone having constructed a road capable of carrying a broad gauge would never think of questioning the advantages to be derived from a broad gauge track. I, however, think

it might be advisable in some cases to lay a broad gauge with much lighter track than is adopted on trunk lines, for instance the weight in a pair of wheels might be limited to 10 tons, which is an excess of the maximum on a single pair of wheels on any loaded wagon. The trains hauled under such conditions would not be quite so heavy as on the trunk lines, still I think on lightly worked roads the economy in permanent way might more than compensate for this.

APPENDIX C.

EXTRACT from a Communication addressed to the Chamber of Commerce regarding the Cost and other Inconveniences of Transhipment at a Break of Gauge.

With regard to cost, for the half-year ending June 1883 at Khundwa, for Hamals, clerks and foremen alone, the cost per ton was nearly three annas

At Nagpur a larger quantity was transhipped and the cost was less. The cause of this difference in cost between the two stations is no doubt due to the traffic at Nagpur consisting principally of grain and seed bags, which are readily handled, whereas at Khundwa there is a large miscellaneous down traffic consisting of stone, timber, coal, piece-goods, groceries, drugs, wines, spirits, casks of porter, boilers, iron-work, machinery, Commissariat and Ordnance stores, &c, &c, many of which items require cranes and take considerable time to transfer.

It would, however, be misleading to take the above, which is simply the expense for portage, as the sole cost of transhipment at a junction station, for these figures do not include the interest on cost of construction and the maintenance of sheds, yard sidings, cranes, platforms, &c, &c, nor the monthly expenditure for watch and ward, shunting, lighting, stationery, and other incidental items which should be comprised to obtain the exact cost of transhipment.

The cost is one which falls on the railways, and the public under present arrangement do not contribute

Generally it may be said that although the public are losers by break of gauge to the extent of loss by breaking bulk, as in such cases as transfer of coal, grain bags, tobacco, ganga and such like goods, also liability to damage during the transfer of light goods, and a delay which is equal to the running time of 150 to 200 miles, still there can be no doubt that the most serious consequences fall upon the railways, and that they are the greater sufferers.

It is well known that at one time the Holkar State Railway paid large sums for demurrage on stock during rushes of traffic for which narrow gauge wagons could not be provided, and the Chattisgarh State Railway would admit that had their line been broad gauge a very much larger grain traffic would have been done last year.

The great evil of break of gauge is that it is impossible for one railway to assist another with rolling stock in times of great pressure. This must of course react on the mercantile community from time to time, and in the time of war, when troops with heavy baggage, artillery and ordnance stores have to be dispatched without delay to the front, the question becomes an Imperial one.

I have no hesitation in saying that in the event of its being necessary to dispatch troops and munitions of war from Bombay, say, to Northern India, that Government would find reason to deplore the break of gauge at Sabarmati and Khundwa, for although it may be said that troops embark and disembark themselves, this is not the case with horses, mules, stores and guns.

I had many years ago some experience of the old T Station at Gloster, where transhipping at a large scale was carried on between the Great Western and Midland Railways, and I know that the most careful management and the most perfect appliances could not at all times prevent, in times of great pressure, delay, losses, and claims which had to be borne by both the public and the railways.

BOMBAY CHAMBER OF COMMERCE

RAILWAY EXTENSIONS IN INDIA

PROCEEDINGS of the General Meeting of the Members of the Bombay Chamber of Commerce, held on the 11th of February 1884

A GENERAL MEETING of the members of the Chamber was held on Monday, the 11th February 1884, which the mercantile community, European and native, and the public generally were invited to attend, to consider a memorial to the Viceroy and Governor General of India in Council with regard to the general policy to be urged on the Government respecting railway extensions in India. The meeting was numerously attended, and the mercantile community was largely represented. Mr F Forbes Adam, of the firm of Messrs. W and A Graham & Co., Chairman of the Chamber, in the Chair.

The *Chairman* said Gentlemen,—We are met together to adopt a memorial addressed to the Viceroy praying him to use his influence to have the extension of railways in India actively and speedily promoted, chiefly, almost wholly, on the broad gauge. This subject has occupied the attention of succeeding committees of this Chamber, and the committee of last year was especially urgent in calling for the construction on the broad gauge of the Bhopal to Gwalior, with a branch from Jhansi to Cawnpore, the Jhansi-Maneckpore, the Godra-Rutlam and the Nagpore-Calcutta lines. But time passed on, and although the wishes of the committee had the approval and support of the Local and Supreme Governments, nothing practical resulted. About the beginning of January last the news came to us that it had been decided to appoint a Select Committee to inquire into the subject of railway extension for India, and that nothing would be done till their Report had been received. Gentlemen, we are all well aware of what the appointment of a Select Committee means. It means delay. And it was felt, not only by the members of this Chamber, but also by the public generally; as the presence here of its influential representatives abundantly testifies, that the matter was not one that could brook delay. An impression prevails that a great deal more might have been done than has been done, were it not for the opposition offered by the Indian Council to the carrying out of the recommendations of the Government of India. Gentlemen, I wish to speak with the greatest respect of the members of the Indian Council. They are men of age and experience, and have laboured hard and well in years long gone by for the good of the State. But it is evident to any one who gives the subject a moment's reflection, that those whose energies have been impaired by prolonged residence in the tropics, and who have in many cases not seen India for 10 or 15 years, or even more, cannot be expected in the autumn of their lives to have the power to accord that constant attention to, or the opportunities to acquire, that thorough knowledge of Indian affairs that alone can make their deliberations of value. Were we certain of finding in the position of Secretary of State—a position the importance of which to India cannot be overstated—a minister strong to emancipate himself from the trammels of party, diligent to make himself closely acquainted with the current needs of India and boldly resolved to carry out all the recommendations of our Government that appeared to him politic and wise, the harm done by an enervated and inexperienced Council might not be serious. But when had we last such a Secretary of State? Have we such an one now? We may have, but had the proofs of it shown themselves more quickly, our meeting to-day might not have been necessary. Be that as it may, the remedy seems to lie in remodelling the constitution of the Council. Instead of selecting members any time within 10 years of their departure from India, and allowing them to act for 10 years, the interests of the country would be better consulted if appointments were confined to men fresh from India having all the requirements of the country, its condition and immediate prospects intimately present with them, and if the term of service was limited to five or even three years. By this means a constant stream of duly qualified men would be kept up. Gentlemen, we have often heard that General Strachey has great influence with the Council in railway matters. You can readily understand how a clever active mind, possessed of the infallibility of a doctrine that he is constant in advocating in and out of season, must sway and dominate the decisions of his more languid and indifferent associates. We are told that it is his aversion to the broad gauge, favoured by the Government of India, that has in great measure arrested action and created a kind of a deadlock. I call General Strachey clever. You may ask me, can you so describe a man who insisted on putting down a narrow between two broad gauges on the trunk line between Ahmedabad and Delhi? Can you speak in high terms of the ability of a man who was chiefly instrumental in getting a bit of narrow gauge added at Nagpore to a broad gauge main leading straight into the grainery of India, and destined at no distant day to form part of a through line to Calcutta? My answer is, a person may be possessed of exceedingly brilliant qualities, and yet on one point hold a wrong conviction, that he would

would rather die than change, and this I conceive to be General Strachey's case. Of course, he has much to advance in support of his views. The first cost of the broad less than that of the narrow. True, but years ago he was met by the reply that 80 suitable miles were better far than 100 unfitted, inconvenient, and inefficient. And since that reply was given we know that General Strachey's contention has lost much of the little force it had. The difference in first cost has been lessened by a fall in the price in materials. We have learned that two narrow engines cannot do the work of one broad, that trains run slower, that more siding and terminal accommodation are indispensable, the number of employes larger, and expense of housing greater. It is important to provide facts, and those who have had experience of working both systems are prepared to come forward with facts without stint to prove that the saving in first cost is rapidly swallowed up in the extra working expenses. But if experience has weakened the strength of General Strachey's arguments, how incalculably has it strengthened the case of his opponents. Here, again, facts are valuable. But when every one using the Rajpootna line, whether it be the large exporter who loses weight in handling every wheat bag of the thousands he weekly brings down for shipment to Europe, or the petty trader, who daily suffers from delay in transporting his few bales of piece goods to the interior for sale, has complaint to make, it is waste of time to particularise. No, gentlemen, the narrow gauge on trunk lines and important feeders of trunk lines is condemned by practical experience beyond all cavil, and for my part I would gladly see nearly the whole system of India built on one gauge—to admit of rolling stock being readily available at any points where greatest pressure existed—the gauge adopted 30 years ago. But with regard to gauge we may safely leave ourselves in the hands of the Government of India. They know comparative first costs and working expenses, and the districts for which each gauge is suited. Gentlemen, I need not dwell at any length on what railways have done for India in these 30 years. During the first 20 years progress was slow. The country, long used to sleepy locomotion, had to get accustomed to the new order of things. And till the Suez Canal was opened and telegraphic supplanted postal communication, people did not need to hurry. Produce was brought quietly down to the coast, by rail or boat, put on board sailing ships, and sold on arrival at its destination. But the last 15 years have changed all that. Steam and electricity have effected great revolutions, and culled nations into keener commercial competition. And when the opening of the Canal brought India close to more energetic Europe, it was then she awoke to the possibilities before her, roused herself from the sleep of centuries, and demanded a place among the pushing communities of the West. In 1872-73, with 5,677 miles of railway, the value of imports and exports, exclusive of treasure, was 87,000,000*l*. Ten years later, with 10,000 miles of railway working, the value had risen to 135,000,000*l*. In 1872-73, India imported piece-goods and yarns amounting to 15,000,000*l*. Ten years later, the figures reached 24,000,000*l*. In 1874, the earliest year of which I can find returns, railways carried up-country 38,000 bales of Bombay mill-made goods and yarns. In 1883, 75,000 bales were forwarded. And not only external commerce and local industries developed, but the internal trade of the whole country was quickened and stimulated to a wonderful extent. If such were the results attained with our pitiful five or ten thousand miles of railways, what prosperity might not be reached were the country more widely traversed? We must not forget that extension must be measured and limited by the capacity of the country to bear expenditure. Railways have been overdone in other countries with unhappy results. But when there are reasonable grounds for asserting that the capital expended, save in a few cases of lines for special definite purposes, will return interest within a year or two of completion of construction, and when we look to the immense area to be opened up, we must confess that even after we have got all our memorial asks for, we will still be far, very far, from approaching the domain of caution. Why, when we have 40,000 miles of railway we shall hardly have one-third of the mileage now working in the United States. There is, doubtless, a wide difference between the circumstances of the two countries, but America is our foremost rival in growing and exporting the great food-staple that India has unbounded capability of producing. It is her example that has acted as a spur to our ambition. Taught by her and armed with the weapons that have served her so well, we can enter the field against her, confident of the issue of the combat. A great authority, Mr. Caird, has tried to frighten people by asserting that the soil of India is rapidly becoming exhausted. Those living in the country and competent to judge contradict this; they see, save in some insignificant districts, no sign of it. What the fields yielded hundreds of years ago they yield still. Perhaps there is safety in the nature of the native plough. Some day deeper ploughing may exhaust the land, unless it is refreshed by invigorating manures. But we have not to do with that now. We have not to concern ourselves with making land already productive produce more, but with bringing under cultivation vast tracts now lying waste, and with finding rapid, cheap, and convenient means of transport for the produce of all the territory that is and can be cultured. If this be done the material welfare of the country will be immeasurably promoted, and the State will reap a great benefit. But, gentlemen, here arises a very important question. How shall we advise Government to procure the necessary funds? Sir E. Baring, under the influence of the fall in exchange that followed on the German demonetization of silver and the simultaneous sudden increase in the output of the American silver mines, declared that India must never again borrow in gold. The money the Government of India required must be raised in rupees, and interest paid in rupees. The principle is

no doubt a sound one, but is it not possible circumstances may arise to make its application unwise? Have these circumstances not already arisen? I think if Sir E Baring were among us now he would see reason to modify or change his views. It is daily becoming more apparent that little capital is available in this country for rupee loans on anything like reasonable terms. There never really was much. A recent paper by Mr Westland of Calcutta clearly brings that out. He shows that of 2,131 lakhs issued during the last ten years, only 801 have been taken up in India. Why hardly any of the 5 per cent G. I P Guaranteed Railway Stock is held in India. Of the capital of 23,500,000 l., only 64,000 l. stand on the India Register. The imports of gold for some few years past, amounting to three or four millions sterling per annum, show the prosperity of the country, but that gold is chiefly used for ornaments and hoarding, and will not be liberated till railways have carried enlightenment to the people. We know that on the average money is much dearer here than in London. We often feel that there is not enough capital in the country to supply the ordinary demands of commerce, and every day fresh enterprises are starting—and the extension of railways would multiply such a hundredfold all over the country—that tempt capitalists with possibilities of high returns—always attractive to investors—and absorb all availing floating funds. It would be impossible, except at a ruinous expense, to obtain in India a tenth of the amount that we consider should be spent in the construction of railways. But turn to England, and there money, to practically an unlimited extent, can be borrowed at 3½ per cent, or a little over that rate. Here comes in the question of exchange. Interest has to be paid in gold, and Government fear to face the future of silver. The silver question is a difficult one and surrounded with uncertainty, but may it not be made too much of? The production of the American mines has of late years shown only a moderate increase. In 1877 it was over 9,000,000 l. sterling. It fell below 8,000,000 l. in 1880, and it has risen gradually to over 9,500,000 l. Meanwhile the wants of gold countries for fractional currency of the world, for arts and manufactures, and of the silver countries of the East for currency steadily expand. True, America may any day stop coining dollars under the Bland Bill and throw annually an additional 5,000,000 l. on the market. But if this movement on her part occurred simultaneously with India's borrowings in London, and corresponding reduction in Council drafts, the effect of the stoppage of the Bland Bill would not be felt, and by the time India had taken all she required, might we not confidently predict that the export trade of the country would have so developed as to ensure the carrying off of the greater quantity without affecting the Eastern exchange detrimentally? If we look to silver held by countries who have, or are desirous of having, a gold standard, I do not think there is much to be afraid of. France holds 50,000,000 l. or 60,000,000 l. of silver, but the very magnitude of her holdings must prevent her parting with it unless prices, for reasons not now foreseeable, materially advance. Germany may still have 7,000,000 l. left, but since her first burst of demonetization she has exercised great prudence in the disposal of what she wishes to be rid of. America herself has 30,000,000 l. coined under the Bland Bill, 23,000,000 l. of which are in circulation in the shape of treasury certificates, and although a balance of dollars of the value of 7,000,000 l. remains in the vaults, which the country refuses to take away, and as already observed, coinage may be suspended, yet it is likely the growing needs of the country may soon call into circulation the 7,000,000 l. also, and it is unlikely Government will appear as a seller. Altogether I am of opinion we have reached a point in exchange when we may take a more hopeful view of the future than generally obtains, and certainly a view that puts beyond all question the wisdom of borrowing in London at 3½ per cent at par, or better than par, in preference to borrowing in India at 4½ per cent, and issuing 90 rupees per 100, or probably less. And the simpler the system of borrowing the better. Three-and a-half per cent. in perpetuity paid in sterling is understood by all, and would attract far more capital than any fantastical and complicated method of issuing loans. As regards the undertaking the work, I confess I am strongly in favour of encouraging Government to do it principally on State lines. Unguaranteed private enterprise is a capital thing. But in India it has to get too many concessions to induce it, and so far it has confined itself to taking up a few lines that must assuredly pay well almost as soon as opened. I would prefer to see Government keep such in their own hands to set off against lines equally desirable in other districts which cannot prove so immediately or so fully remunerative. It has only so far prospected about 1,000 miles, and but 96 are open. Some people hold that if all restrictions and Government interference were withdrawn, things would go faster. I hope that opinion will perish. It is not that that checks private enterprise. It is simply because there is not money in the country for this work. The money must come from home, and ordinary capitalists are disinclined to invest far away from head-quarter in ventures that will give slow, and perhaps never very brilliant returns. If we wait for private enterprise we will not get 5,000 miles in the next 20 years. Trust funds are not available for such work. It is trust funds that go far to help sterling Government loans. Then, as for guaranteed companies, our experience cannot have filled us with any predilection for them. It is said management is more economical in private than in State hands. This may or may not be the case, but on the other side we find a sad absence of departmental discipline and co-operation in some guaranteed lines. Moreover, in India, where we cannot have competition on railways, there is a marked tendency to manage such lines with a view to what may seem best for the shareholders, and without giving any consideration to public convenience. Take the Great Indian Peninsular for instance. We cannot get enough rolling-stock.

We

We press for it, and they reply that what they have lies idle part of the year. Is that an argument? If an engine can pay itself by working for a month, it justifies its existence. Reduce rates, and engines might not lie idle. We ask for cheaper rates; they answer that cheaper rates would not increase traffic, and this in the face of the illustrations presented by the Sind, Punjab, and Delhi line, that actually made a wheat trade to Kurrachee by reducing its rates below those of any other line. In 1881, it carried only 169,000 cwts of wheat, and in 1882, 2,700,000 cwts. And of the Rajputana line, that carried in four months, May—August, 1882, 239,000 cwts., and after a reduction of rates in the corresponding four months of 1883, over a million cwts. And it is well known that the standing charges from so great a part of working evenses that moderate increase of traffic more than balances a material rate reduction. Unfortunately, all questions of policy must be referred to a board of directors in London. Fancy the London and North Western controlled by a board of directors in Hongkong. The thing is ridiculous. I look at the list of names, and I find Colonel Holland chairman. Colonel Holland has not been in India for about 30 years. What can he know about India? I come on the name of Mr. Scoble: many of us knew him. An able and distinguished barrister. But I fancy his knowledge of Indian railways was confined to occasional trips to Poona and a celebrated visit to Baroda. I see the name of Mr. Campbell, a leading and successful merchant. I may be wrong, but I don't think he has been in India since the Suez Canal was opened. The other names are those of gentlemen in much the same position as regards knowledge of India of to-day. Would it not be better to have a clever agent in London, and to have a board of well-informed men on the spot? But then there would be no fees in the city! Yes, gentlemen, I would rather see new lines chiefly in the hands of Government, who have ever evinced a disposition to manage for the good of the country, and who would improve their finances in improving India. If all the lines at present working were State lines, and the capital borrowed at 4 per cent instead of 4½ per cent and 5 per cent, Government would already be richer by over a million sterling annually. I do not see why Government should not, as a matter of accounts, separate from the Budget all existing State and guaranteed lines, agreeing to pay to the Finance Minister the average surplus of the past three years, and start an independent railway fund, using the surplus over and above this payment to assist in constructing new lines and arranging after a certain number of years, when the system for India might be considered complete, to pay net profits yearly into the Imperial exchequer. Government could borrow for this fund either independently or through guaranteed companies. The idea may be worthy of being entertained. It is to me that Government did what every private undertaking does, and that is, write the interest incurred during the period of construction to the debit of capital account. Government dislike this. For what reason, I know not. In the event of Government deciding on a bold policy, the method would prevent undue pressure on the Budget. But if Government reject these proposals, and insist that out of the yearly revenue the interest must come, and that the revenue cannot bear the drain, then I say, rather than not have railways let us have taxation. Taxation is a delicate subject. The days for indirect taxation have passed. There is still a difference of opinion as to the wisdom of the policy that abolished the import duties. One of the best arguments against the abolition was used by our townsman, Mr. Sorabjee Shapoorjee Bengalee, who urged that these duties were the only means we had of reaching the inhabitants of native states, who pay nothing in return for the peace and prosperity enjoyed under our rule, and which I am sorry to say they disclose their appreciation of by levying transit duties that in reality take the form of protection. I myself, believe firmly, that the removal of the import duties was a wise measure, conferring a benefit on the poor classes. I should like to see the salt tax reduced or remitted altogether for the same reason. What a boon to the millions of poor throughout the country. Then there is the export on rice. It is not quite so objectionable as most export duties, as Burma has a command of the home markets, and the taking off of the duty would not, in cheapening cost, increase consumption so much as is generally the case, but the duty is bad in principle and ought to go. But we have to get revenue, not to give it up. If indirect means are closed to us, there are only direct left. The direct tax that first occurs is the license tax. Never was a tax so powerfully, so eloquently condemned, and by gentlemen here to-day as the license tax. Partial and unjust in its incidence, expensive to collect, and yielding comparatively little, it has nothing to recommend it. It is high time it was swept away in favour of its fairer cousin, I mean the income tax. That tax falls on each in exact proportion to their ability to pay. It leaves no one out above a certain annual income, it is elastic and can be readily adapted to circumstances, and even a minimum per-centage would bring large receipts. It has drawbacks. We all know them well. None of us like our affairs pried into, and there is danger of abuses in collection. But it is the duty of every citizen to sink minor prejudices for the common good, and abuses in collection would rapidly disappear as machinery throughout the country got perfected and the tax became familiarised. It is not just, it is not right, that so many become wealthy and pay hardly a rupee to the State that protects them. I have been told that leading members of the native community would feel indignant were the income tax reimposed. I take leave to doubt it. I do not, I will not, believe that those who ask that the terms of the Queen's Proclamation of 1858 be not lost sight of will hesitate to come forward when called on to take their proper share of the burden of taxation. And looking to the prospects of Indian finance, not forgetting the precarious nature of the opium

revenue, which might be lost to us by the spread of poppy cultivation in China and other countries, it is difficult to avoid the conclusion that, however distasteful it may be to us, the income tax is one day inevitable, and if it be the means of hastening railway extension the sooner it comes the better. Gentlemen, much that I have said is matter of opinion and open to discussion, but the subject of the memorial, of which I now move the adoption, is sure to have your enthusiastic approbation. The prosecution of railway extension on a large scale claims the support of Government, as it will swell the land revenue and the telegraphic and stamp receipts, and give great security against famine. It speaks to the sympathies of military men, for it will facilitate the movement of troops to meet the enemies of our country, from whatever side they threaten. It enlists the approval of merchants, bankers, brokers, and manufacturers, for it will augment the volume of trade; of lawyers and all professional men, for their high and useful services must find place where commerce flourishes and life's activities develop, of those interested in education and of the Press, for what greater assistance can they have in spreading intelligence, knowledge, and enlightenment than the locomotive, of philanthropists and missionaries of all denominations, for new fields will be prepared for the exercise of their benevolent and unselfish labours. Yes, all sorts and conditions of men, all trades, professions, and occupations, whether native or European, in England or in India, all who have the welfare of India at heart must join in urging on Government to employ the means at their hand to promote the moral and material progress of this great country. I move that the memorial be adopted. (Applause)

Mr *Morat*, in seconding the resolution, said I have listened with much attention to the able and interesting speech of your Chairman, and have much pleasure in seconding the adoption of the memorial which he has just proposed. The opening paragraph will be most heartily endorsed by every subject of the British Crown. "That the active prosecution of railway construction in India on a far larger scale than has yet been contemplated, is of the utmost importance to the country," has been felt for many years, and is now engaging the attention of Government and the leading commercial associations both at home and abroad. What the results of such a policy would be, is apparent from what has attended the rapid extension of railways in other countries. Great Britain, the first to lead the way, for many years, reaped enormous advantages in the increased value of land, improved wages, and the country was fairly prosperous. In time, however, keen competition sprung up from the other side of the Atlantic, the United States, from the improvement in ocean transit, and her vast network of railways, being able to lay down raw products and notably food grains in Europe, at much lower prices than those at which they had hitherto been supplied, and cheap food is always an advantage, more especially to the labouring classes. From somewhat similar circumstances, India at a later stage was enabled to enter the field, and the results have been accompanied by a success which would have been more marked had our communications with the interior been equal to the requirements of the country. When we think of the Great American Republic, with her 120,000 miles of railway to a population of 55,000,000, we cannot rest satisfied with 11,000 miles for 250,000,000 inhabiting a country half the size of Europe. Mr Chairman, I see from the memorial that you only ask for an annual extension of 2,000 to 3,000 miles per annum, and those who know the capabilities of the country admit that this is a very modest mileage indeed. If we are to keep pace with the age, the policy of opening up the country at a snail-pace must give place to the more vigorous one we are now advocating. If it is carried out there will be marked prosperity wherever the iron horse travels, the condition of the people improved, and new markets found for their produce, as well as for the supply of foreign commodities. On the question of gauge the Chamber remains true to its guns, but I have said so much on this subject in former years that I shall not detain you with unnecessary remarks here. All experience goes to prove conclusively that we were right in advocating the broad gauge for trunk lines and feeders where the traffic is heavy. In addition to carrying capacity and economy we add that of rapid conveyance. Your papers clearly show that break ng bulk and the delay in transit by the narrow gauge line has already resulted in a heavy loss to the commercial public. To those who have to work for a narrow margin, loss in interest, demurrage on chartered steamers, to say nothing of probable loss of market, is a serious matter. In discussions of this sort the passengers too often play a secondary part as compared with goods, but I think that every traveller will readily allow that for speed and comfort the narrow cannot for a moment be compared to the broad gauge. After your earnest appeal in December to have the Jhansi-Maneckpore line made on the standard gauge, it must surprise us all to hear that material has been ordered for the narrow gauge. If this is not the case I trust Government, or the responsible authorities, will come forward at once and inform an interested public (hear, hear). The construction of the Nagpore-Calcutta Railway on the broad gauge is an absolute necessity, and some idea of the volume of traffic which the through line between the two Presidency cities will attract may be gathered from a statement which has just been made to the effect that the Great Indian Peninsular Company intend to lay a double track from Bhowasul to Nagpore. And now, gentlemen, I must refer to the most important part of the whole scheme, namely, the snags of war. You speak of twenty millions per annum, and as railways generally take five years to complete and be brought into working order, this means one hundred millions in the next five years, or two hundred millions in ten years. The present lines are paying well, the earnings being over five per cent. India, although possessing,

sessing large undeveloped resources, is a poor country as regards money. The large sum required must mainly be obtained by borrowing in sterling on the London market. The credit of India is undoubted there, and with the exception of England, Holland, and perhaps the United States, no country can borrow cheaper. This is an opportune time, there is a great scarcity of first-class securities, and I saw it stated the other day that there are now two hundred millions sterling waiting investment. Seeing, however, that the Government of India, whose revenues are collected in silver, prefer to borrow in that currency, I do not see why both channels, namely, sterling and rupee, should not be availed of. Further, I think it would be good policy to get the native states to do something more by money contributions and the construction of feeders, which would open up their most fertile districts. On Wednesday next his Excellency the Governor is to cut the first sod of the West Deccan Railway, one of those important lines recommended by the Famine Commission, of which the Honourable Mr. Peile was a member. It will run through the rich valley of the Krishna, and pass the important city of Kolhapore. Here is an excellent opportunity for that State to contribute by way of feeders or otherwise. And the money need not be wanting. A State which can boast of something like a palace for its hospital where a plain building might have done, can surely raise a few lakhs of rupees for the purposes of railway extension. Gentlemen, your Chairman and I hold very different views regarding private enterprise. Although there is little or no reference to this subject in the memorial, I am in favour of availing of this channel not only for railways, but for other public works and commercial undertakings. To private enterprises we owe the London and North Western Railway, the finest services in the world, and in point of money value worth nearly the whole of the Indian system put together. Lord Northbrook at a late meeting of the Society of Arts, expressed himself in favour of private enterprise for Indian railways. Had the Indian Government been more liberal in their terms, a large amount of capital could have been raised a short time ago, and the country been in a better position than it is at the present day. We might have had the much-needed Bhopal-Jhansi Cawnpore extension made long ago but for the narrow policy of the India Office. The matter is now to be referred to a Select Committee of the House of Commons. Delay is always dangerous, and we are urgent in our appeal that this matter should be settled as speedily as possible. The case of the Bengal and North Western Railway may have frightened capitalists, but it is never too late to mend. If a money guarantee is not to be given, a suitable equivalent in some other way might be offered. Before leaving the subject, permit me to refer to the right Government have of securing the leading guaranteed lines by way of annuity or purchase at the end of either 25, 50, or 75 years before the expiry of the 99 years' lease. The East Indian and Eastern Bengal have been dealt with, and others will follow. What I am sure we should all like to see is some local control, especially of a mercantile character. When dealing with the Port Trust Bill as Chairman of the Chamber in 1879, I suggested that similar Trusts might be formed for the management of the great railways at the leading commercial towns in India, and Sir John Strachey, in his book on Public Works, published two years later, wrote on the same lines. From the experience I have gathered since my leaning towards such a system is perhaps stronger than ever, and I do think the commercial public might reasonably ask to have more to say in the management of great works of so much importance to them. (Hear, hear.) And while advocating railway extension let us not forget approaches by those valuable auxiliaries, roads and water-ways. I have recently gone over some parts of the country, and the want of good roads in many important places is most striking, fair weather tracts being only available where first-class bridge roads are really necessary. In some places we are actually outdistanced when compared with the surrounding native states. The approaches to the leading stations are capable of improvement. And why should the opportunities for inland navigation offered by such rivers as the Krishna, Godavery, and many others, not be availed to the utmost? The more we think of the subject, the higher the future prospects of the country seem, and the less have we to fear from alarmists of the Hyndman stamp. In the course of my remarks I have had occasion to refer to the resources of India, but in order not to overtax them, economy in the administration of the country is absolutely necessary. I have no doubt we shall hear more of this in after years, and a commencement in the right direction cannot therefore be made too soon. In conclusion, let us hope that this memorial will be acted on in the spirit it deserves. If it is, those who have seen the rapid strides which India has made of recent years may yet witness the further progress of which she is still capable, and the benefits which will result are more than likely to be of a permanent nature. We shall then hear less of the proverbial poverty of India, and the spirit of enterprise now shown in the towns must in time extend to the interior. (Loud applause.)

The Hon. Sir Jamsetjee Jejeebhoy, Bart., said. Mr. Chairman and Gentlemen,—Railways, more railways, for India is a subject that has been agitated perhaps more than any other, especially since the wheat trade of the country has shown such promising signs, and in its rivalry with the United States, the only reason that can be assigned why that country should so greatly distance ours in the trade is, purely and simply, that while the railway system in America has so vastly increased, and is even still increasing, that of this country has been, we may say, stagnant. Then again we have that pernicious innovation unknown in the United States, namely, break of gauge, and in a country like this, in which railways might be needed at any moment for military purposes in times of

extreme necessity, such a system carries its own condemnation. It may, indeed, do well enough for mere feeder lines to be constructed on almost any gauge or principle, but for the main or trunk lines to be laid on any other than the standard gauge is, as has been so often urged, particularly by the great trade centres, to cripple at the outset the commercial and political interests by which India is to be raised from poverty to comparative affluence and from a semi-barbarous to a state of high civilisation. The wheat of this country has been pronounced equal if not superior to that of America, and notwithstanding the distance it has to travel to reach England and the Continental markets over and above that exported by the United States, it can be sold for lower rates than the wheat exported by our great rival. Yet we are beaten in this, as also in our trade in other seeds, on account of our very limited extent of railroads, and to remedy this we must naturally ask the Government vigorously and at once to put forth its best energies to extend the system of railways, as prayed for in the memorial now being submitted from this Chamber to his Excellency the Viceroy, and thus place India second to no country in the world in this vast trade. But then no such mistake should be again perpetrated as that which has rendered some of our principal lines comparative failures, when the traffic on these is compared with the traffic on the broad system. From the appendices to the memorial his Excellency will be able to judge of the unfavourable contrast of narrow or metre gauge with broad gauge lines, notably the Chattisgarh, Holkar, and the Rajputana-Malwa State Railways. With regard to capital for the construction of the proposed or other lines, it need only be said that, on the basis so elaborately explained in the memorial, there should be no difficulty whatever in alluring capitalists from England to invest in this project on the very favourable terms that it offers, and, lastly, in the starting of these new lines it is to be hoped that Government would not allow any delays to hamper the scheme or interfere in any way with the construction of the extensious as suggested by the memorialists, but that all expedition would be exercised which would give India at no distant date a complete network of railways spread over her grain-producing tracts. Finally, we have only to take a retrospect of the dreadful famine periods through which we have occasionally passed, in further support of fresh railways in a country like India, subjected periodically to drought; and in order to arrive at some idea of the incalculable good which even our very limited system of railroads afforded to the afflicted regions during the terrible Orissa, Madras, and Deccan famines, we have but to refer to the annals of those times. With these remarks, and in the hope that the best results will emanate from the present movement, I sincerely join my humble voice in support of the memorial.

The Hon. Mr. *Macaulay* said: The able address which we have listened to from the Chair, and the remarks which have fallen from Mr. Mowat and Sir Jamsetjee Jejeebhoy, leave very little for me to say. I feel sure that every one in this room, and every one within the four corners of the Empire whose opinion is worth having, will agree in the recommendation which is made in this memorial. It cannot, I think, be regarded as satisfactory that the average annual construction of railways since the first commencement was made, in 1853, has only been 330 miles. When the enormous size of the continent of India is taken into account, this compares very unfavourably with what has been done in other countries. It clearly shows that the successors of the great Marquis of Dalhousie, who first encouraged a system of railways, have failed to realise what was apparent to him, that by the judicious laying out of trunk lines from one end of India to the other the interest of the State would be advanced, and that an enormous trade would be developed. His successors have apparently not looked at it in the same light. They have been very apathetic. From whatever cause, the result is that very little has been done. They have failed to realise the enormous benefit which followed the making of railways, not only to the mercantile community, to the agricultural classes, but to the State itself, from the increased revenue that would have accrued from the additional land which was so opened up. Our Chairman has referred to the civilising influence of railways, and to my thinking no agency which has been at work in this country has done so much for the moral good of the people, as well as for their pecuniary welfare. Railways have tended more than anything else to break down the system of caste, which has been the bane and curse of this country for centuries past. The four lines which are specially recommended to the notice of Government in this memorial have all at various times been urged, and with great force, by this Chamber. It is very disheartening to men who, like myself, are strongly impressed with the desirability of taking every available means for the development of the commerce of the country, to find that year after year nothing is done. It is, I think I am right in saying so, fifteen years since the Chamber impressed on Government the necessity for opening up the Southern Maharashtra country, and yet it is only now about to be begun. I believe that we are indebted to our present Governor for sanction being given to the Western Deccan line, which is to be begun on Wednesday next. From the time he made his first public appearance in Bombay, he has shown a keen appreciation of the advantages of railways, and it is to his perseverance more than to anything else that the Secretary of State has at last sanctioned the making of this line. If the recommendation of this Chamber had been listened to ten to fifteen years ago, thousands of lives would have been spared and millions of rupees. I cordially agree with the remarks made in the memorial with regard to the undesirability of break of gauge. In feeder lines in outlying districts possibly a line of cheaper construction might meet the requirements; but it is nothing short of an iniquity that to please a single individual a narrow gauge should be thrust between two broad gauge lines. Every one engaged

engaged in commerce in this city has had many costly experiences of the delays, and the loss by wastage, in double transshipment; and I am sure that it would have redounded to the credit of the then Governor of Bombay if he had put down his foot and have refused to permit the introduction of the narrow gauge on the Rajputana-Malwa as Lord Napier of Magdala did with the line at Peshawar, which was proposed to be made on the narrow gauge. He affirmed that he was responsible for the moving of troops on the frontier of India, and he resolutely declined to allow the line to be made on any other than the broad gauge system. Another attempt which well nigh succeeded was made to introduce the narrow gauge in the Indus Valley between two broad gauges, under exactly similar circumstances to the Rajputana. If that had succeeded the trade of Kurrachee, which is now rising and increasing, would be throttled, as the trade of Bombay now is with Northern India, had Lord Mayo not refused to allow it to be constructed after the material for the narrow gauge had arrived in India. After some little delay the broad gauge was laid, and now Kurrachee is reaping the benefit. It is an open question whether it would be better for railways to be constructed by private enterprise or by the State. My own opinion is that the time has not arrived for constructing by private enterprise, simply because there is no accumulation of realised capital in India which could be made available for this purpose. We have no alternative but to look to the State to give us railways, with regard to the raising of capital for the same reason, we must look elsewhere for it. To London, as the financial capital of the world, we must go. I think with you, Mr. Chairman, that too much is made of the depreciation of silver, and that we may rely with reasonable confidence in the present level of rates being maintained. A recent writer in the "Economist" has remarked that the experiment already tried in India of guaranteed and State lines is a failure; but I think he could not have had before him, when he wrote these remarks, the Administration Report for 1882-83. In it I find that instead of these lines being a loss to the State for the last five years, there has been a surplus—a gradually increasing surplus—and for the year 1883-84 the estimate is 611,696 l. It is quite true in the earlier years there was a very heavy deficit. I was glad to hear you, Sir, lay great stress upon the absurdity of trying to govern a mighty country like this from such a distance as London. It is quite impossible that a Secretary of State, who has never put foot in India, can be capable, however anxious he may be, to form so reliable an opinion as men who have served most of their lives in this country. I could have wished that the memorial had contained a request urging upon Her Majesty's Ministers to give more power to the Viceroy and to the local Governors of presidencies. I am perfectly satisfied that this would be attended with incalculable benefit to the country at large; it would prevent the delays that now occur. Trivial matters are referred home, and nothing can be done here, and red-tape and delay is the order of the day in everything. Perhaps at some future time the committee of the Chamber may see its way to take up this subject, and I think next to the burning question of railways, that if they do so they will deserve the thanks of the members of the Chamber and the community at large.

Mr *Dinanath Raghunath Khote* said the resolution before the meeting had been so eloquently and ably proposed and supported by previous speakers, that it needed little elucidation at his hands to commend it to favourable consideration of the meeting. The adoption of the memorial by the unanimous verdict of the Chamber, representing as it did the very quintessence of commercial thought and enterprise in the city, would imply an unequivocal recognition on the part of the public of the principles propounded in this able and exhaustive document. There could be not a shadow of doubt that the question of the extension of railways in India had come to be of imperious necessity. It was rather late in the day now to advance arguments in favour of what had become an absolute truism. It would savour of supererogation on his part to recount to them the innumerable benefits accruing from railways to the country. He would merely content himself by saying what had already been so ably urged by the Chairman and the Hon. Mr. Macaulay, that in England, in America, and on the continent of Europe, the railway had been a great civilizer. Celerity in transit was the essence of success, both commercial and political, and this rapidity of motion was peculiarly needed in a country like India, where vast tracts of fertile lands lay dormant or partly cultivated from the want of cheap and easy communication with the principal centres of the market, and where so much was yet to be done in order to successfully compete with the more civilized countries of the world. What with the growing exigencies of commercial enterprise in India, calling for the most strenuous efforts on the part of the railways now extant to cope with its increasing requirements and to remove the perpetual clog which impeded the producing capacity of the country, what with the difficulties which beset the path of the Indian cultivator when he was called upon to compete with America having natural and artificial advantages all her own, what with vast tracts of land remaining uncultivated for want of railway communications at one end and at another the surplus productions of luxuriant soils famishing for want of means of transport, what with the periodical visitations of famine which not unfrequently put their railways and their Government to an inordinate strain, what with political needs and all the serious inconveniences of transport, caused by the want of railways in various parts of this continent, the urgent necessity for the extension of railways all throughout India was every day becoming more and more pressing. The lines of railways that they already had proved in an unmistakable manner what good they might expect from the extension they asked for (Applause.) They were not asking Government to make an untried experiment, or one which was not feasible, or conducive to the further amelioration of India and her peoples. All that needed to be

done on the present occasion was to invite the attention of the authorities on the subject, and he thought that could be done by the adoption of the memorial. The benevolent and enlightened policy of the present Government was a sufficient guarantee that this question would occupy the foremost place in their deliberations. He would not take up their time by discussing the narrow and the broad gauge question. It was fully gone into at a public meeting held at the Town Hall some years ago, at the instance of that very Chamber, where the arguments of the advocates of the narrow gauge were irretrievably torn to pieces. (Loud applause.)

Mr *James Thorburn* said that as he had previously had his say upon most of the subjects in the memorial, he did not think that anything like a speech from him was necessary on that occasion. He would merely say that he cordially agreed with the way in which the memorial had been prepared. They were all at one as to the necessity of a rapid extension of railways in this country. He agreed with what had been stated in the memorial, that it was quite impossible to raise sufficient capital for the purpose in India itself. The Chairman had referred to the constitution of the India Council. The speaker believed that the Council was merely a consultative body, but as far as the gauge question was concerned, it had made itself an executive council. He thought the adverse influence of the Stracheys had been carried to greater lengths than it would have been possible if they had confined themselves to merely advising the Secretary of State on the subject. They had a tramway system in Bombay, and he thought that if Mr. Kittredge or Mr. Clarke had laid down a narrow rail between the Bombay Club and Boies Bunder connecting the broad lines at either end, they would have been called mad and considered worthy of being sent to the Lunatic Asylum at Colaba. (A laugh.) They did not object to the narrow gauge in itself, but they certainly objected to its being laid down to connect two broad gauges. The speaker went on to say he was very glad to see the natives take part in that meeting. The other day a native paper stated that merchants were advocating the construction of more railways through utterly selfish motives. It was said that their object was to make money by exporting to different countries the grain which was required to feed the people of India. Now, what had fallen from Sir Jamsetjee and Mr. Dinanath showed that they did not share this opinion. The arguments advanced by the native paper were so hollow that he need not take up their time in refuting them, it being perfectly absurd to say that any selfish motives underlay the agitation for the extension of railway communications in India. (Applause.)

Mr *Geary* said he had hurried up to town for the purpose of being present at the interchange of views on the question of the development of the railway system in India. He wished to bear his humble testimony to the general prevalence of a conviction in this country that the railway system, as it existed at present, was quite inadequate for their needs, and that a very large extension was absolutely necessary to maintain the position of India as a great exporting and commercial country. When he was in Hyderabad last week, he found that one of the burning questions there was whether a large scheme for the development of the railway system of that state should be carried out. Apart from the merits of that particular scheme, he did not find that even the most conservative of the native politicians of that country had the slightest doubt that an extension of railway in a certain degree was necessary in that state, as well as in India at large. On his arrival in Bombay, the first document placed in his hands was an invitation to be present on Wednesday at the opening of the Western Deccan Railway, an important line which would connect Poona with large tracts of fertile country. There was an undoubted tendency to progress in the matter of the construction of more railways. (Hear, hear.) The obstruction of which they had to complain had not its seat in India, the Government of India being of the same opinion as the Chambers of Commerce and the public generally on the point. They were all agreed that the Indian bullock cart could not continue to compete with the American railroad. (Hear, hear.) The Americans had 120,000 miles of rail constructed in the period during which they had laboriously built up some 10,000 miles only. They all knew that the obstruction did not come from any responsible body in India, nor from the native or European mercantile community, nor from the Government of this country, but it came from a certain obstructive body in London, called the India Council. It had been pointed out by the Chairman that the Council was an antiquated body, which had lost touch of the wants and needs of India, and whose influence on the Secretary of State was calculated to jeopardise the interests of this country. It would be necessary for them to maintain the present agitation firmly and to get the Chambers of Commerce in England to aid them in overcoming the obstruction.

It had been urged that the reconstruction of the India Office would be a thing desirable in itself. He (Mr. Geary) believed that from every point of view it would be a desirable and necessary reform, and if they wished to have their railway system thoroughly and properly taken in hand they must reform the India Office. (Hear, hear.) The Government of India was quite prepared to do a great deal, but its hands were tied by orders from home. He did not think that the masterly memorial, which had been drawn up by the Chairman and the Secretary, was intended to lay down a definite programme for the development of railways, but rather it was an emphatic protest against the policy which had left their country far behind other countries in respect of railway construction. He supposed that the gentlemen at the India Office, who were very acute critics, would lay hold of the proposal to spend so large a sum as twenty millions sterling per annum for the next ten years. But if they convinced themselves, or succeeded in convincing

convincing others, that it was too large a sum to be expended every year, it would still be open to them to withdraw the opposition which had within the last few years kept some nine millions sterling unemployed which English capitalists were willing to invest on a limited guarantee. Such a cautious Minister of Finance as Sir Evelyn Baring was willing to give that guarantee. Mr. Hope and the Government of India were also in favour of the proposal to utilize the sum, but it had been intercepted, as it were, in England by the India Council, while this country was in urgent need of more railway communications. There was no doubt that if the Government of India had been allowed to give the guarantee in the present case, other companies would have come forward with similar projects. It was perfectly well-known that the Government had been fighting a paper war with the authorities in London, and that it had hitherto been successfully obstructed. But he hoped that the meeting that day, followed by others in other centres of trade throughout India, would succeed in calling attention to the fact that in India itself there was a general unanimity as to the urgent necessity of carrying out on a proper scale the development of the railway system of the country. (Applause.)

Mr. Lang could not say that he entirely agreed with the memorial altogether. He had no wish, however, to spoil the harmony of the meeting; but he thought that in a memorial of that sort they ought to be careful not to go too far. They ought to be quite sure of their ground before they made a statement which might be considered rather strong and forcible. He thought that in paragraph 19 of that memorial they took too much upon themselves in saying that "your memorialists are of opinion that the amount needed could only be satisfactorily raised in London and in sterling loans, and that it is only a waste of time to consider whether it could be raised in rupee loans in India." Of course, they were all of opinion that the amount of money required for the construction of railways in India could not be found in India, still a good many of them were of opinion that a large proportion, or at any rate a proportion, might. He also questioned the accuracy of the statement made in paragraph 21, that a gain in exchange of over 20 per cent. would be effected on the amount of the sterling loan transmitted for expenditure in India.

Mr. Poole said that they must not forget that it was through the experiments instituted by the Indian Council, the results of which were reported in the "Economist" of last June, that the superior qualities of Indian wheat had become known in the consuming centres, and as much had been said at that meeting about the obstructiveness of the Council, it was but fair to give them credit for the good which they had done.

The Chairman said I am sure I speak the feelings of the Committee when I say we are grateful to Mr. Lang for his criticism. It is most desirable that any points, even affecting only matters of detail, that do not appear clear should be brought out and discussed. Dealing with so important a subject, we cannot have the ground too firmly under our feet. As regards the first point, viz., that part of paragraph 19 which says, "it is only a waste of time to consider whether the amount could be raised in rupee loans in India," I have to remark that this does not preclude raising a portion of the required capital in the country in the manner suggested by Mr. Lang. All we lay stress on is the fact that it would not be possible to get the whole amount, and we give reasons for judging that even a very small amount would be difficult to obtain on reasonable terms.

Perhaps Mr. Lang has not seen the article recently published by Mr. Westland, Comptroller General in Calcutta, in which he shows how little of past loans has been absorbed in India. No doubt many gentlemen present have seen it. This article also shows that in London rupee paper is out of favour, and winds up as follows: "The events of the loan (1883) have certainly confirmed the conclusion reached by a survey of the history of the past few years, that under present circumstances, and until the London market again looks with favour upon our rupee paper, there is nothing approaching to a yearly absorption of two and a half crores of rupees of debt." I do not think there is any need to alter the wording of the memorial as regards this point.

Then as to the second exception taken, that in para. 21, where it runs "the sterling operation would result in a saving, in the first instance, of perhaps 10 per cent. or more in the principal (plus a gain on exchange of over 20 per cent. on the amount of sterling loan transmitted for expenditure in India) and of $\frac{1}{2}$ to $\frac{2}{3}$ per cent. in interest," I admit that there may be better ways of stating the matter. What the Committee wished to make clear was, that by taking for calculation a basis of 2s. per rupee, we have on the one hand a gain of over 20 per cent. (difference between 1s. 7½d. to 1s. 8d. and 2s.) when money is brought out to India. For every rupee we get in India we pay only 1s. 7½d. in England. On the other hand, interest has to be remitted from India. There is an apparent gain of 1 per cent. between 3½ per cent. and 4½ per cent., but we have to remit the 3½ per cent. at 1s. 7½d. exchange, or more or less, and so this reduces the gain to $\frac{1}{2}$ per cent. But, as I said, there may be other ways of bringing the point out more clearly. I would therefore propose to put the memorial to the vote, at the same time giving a promise that the Committee, before forwarding it, will consider this point—only this one point—and make an alteration if they deem it needful.

With regard to what fell from Mr. Poole, I agree with him that it is but ordinary grace that we should acknowledge what the Indian Council have done for us when we are making such loud complaint of what they have not done or have stopped the doing of.

The Chairman's proposition was then put to the meeting, and carried unanimously.

Mr. Nanabhoj Byramjee Jejeebhoy said the next resolution which had been entrusted to him was "that the memorial, along with the proceedings of this meeting, be forwarded to His Excellency the Viceroy and Governor General of India in Council, through the local Government, and that copies be forwarded to the London, Manchester, Liverpool, Glasgow, Leeds, Bristol, Hull, and Dundee Chambers of Commerce, with a request that they will respectively urge the Secretary of State for India to immediately adopt a policy in regard to railway extensions in India on the scale, and in the manner, suggested in the memorial." They would see that it was a resolution which would require no words of recommendation from him, still he could not resist the temptation to speak a few words on the general question of the extension of railways in India. There might be two opinions as to the relative merits of the broad and the narrow gauges, and they knew that both had their supporters, though it was every day becoming more and more apparent from the results of the practical working of the respective lines that the superior claims of the standard or 5 ft. 6 in. gauge over the metre gauge would be universally recognised, as the latter continued to show its palpable failure to meet the increasing demands made by the development of India upon it wherever the traffic was at all heavy. It was very easy to see that the day was not far distant when one after another the existing narrow gauge railways connecting trunk lines would have to be taken up, to be at once replaced by the efficient broad gauge, as had already been done on the Indus Valley Railway, and the metre gauge would be confined to branch or tributary and local lines only which had a light traffic. He had for a long time felt a very warm interest in the discussion of this vexed question, which had been before the public for a good many years, and had taken an active part in convening meetings and agitating against the infliction of the narrow gauge on the main lines, and he need not, therefore, dwell longer here upon the subject. He might say, however, that though the narrow gauge system had still a few supporters amongst men who years ago have left the country and had lost touch of the requirements of trade, there could be, and indeed there were, at the present moment no two opinions as to the necessity of the extension of Indian railways. This extension, on the scale and in the manner suggested in the memorial they had just adopted, was, in the first place, of very great importance in the interests of the people of India, where famines were of frequent occurrence. Secondly, in the very keen competition of other countries with India, it is of equally great importance in the interest of the imperial revenue, that by carrying out the proposed extension without unnecessary delay, the Indian export trade should in every possible way be encouraged and fostered. The history of that trade during the last few years had proved how largely it could be augmented by the judicious and timely extension of the railway and by the removal of restrictions. With more extended fields for production and a cheap means of transit to the coast and thence to Europe, India might soon hope to compete on equal terms with America for the supply of corn to Europe. The United States at present enjoyed a superiority over them in the corn trade, which was only attributable to their more liberal policy in the matter of railway extensions. The acreage available in India for further tillage was as unlimited as that which the rival country could command, but America had gone on extending her railway system till she had now upwards of a lakh and twenty thousand miles of railway, while India had only a little over 10,000 miles open in all. In spite of this apparent disadvantage, India was able to export nearly twenty million cwts in 1882, as against their thirty-six millions of 1881. This was owing to the fact that they could produce equally good, if not superior, wheat at a considerably less cost than America could even hope to do, and they only required additional and unrestricted facilities of transport in India to outdistance America in this trade. In spite of its ill-adapted narrow gauge and cramped facilities for carriage, the Rajputana Railway had been of immense benefit to merchants and others interested in the development of trade between India and Europe. Bombay being nearer to Europe than any port in India, excepting perhaps Kurrachee, the carriage of goods from Europe here was, of course, considerably less, and consequently Bombay mercantile firms were in a much better position to supply articles at cheaper rates than any other city in the country. That official intolerance of criticism which was the curse of this country during the unfortunate régimes of the Strachey Brothers and Lord Lytton had now luckily given way before the more enlightened and liberal policy of the noble statesman whom it was now their good fortune to have as the Viceroy of India, and who had the best interests of this country truly at heart. They had also reason to congratulate themselves upon having a Governor possessing great practical experience in railway matters, one who knew their wants and wishes, who was able and willing to stand by, and if need be to fight for their rights, and whose bold, sincere and outspoken opinion about the inadaptability of the narrow gauge on the Rajputana Railway expressed on the occasion of his opening the line, they could not help contrasting with the half-hearted and exceedingly weak and vacillating policy of their late Governor, Sir Richard Temple, who acquiesced, and even aided in a manner in sacrificing the interests and the claims of this Presidency to the whims and caprices of those in higher places and in power. The speaker hoped that the exertions of this Chamber, aided by the valuable and powerful co-operation of the sister Chambers named in the resolution which he had submitted to them, would soon be crowned with complete success, and that the trade which legitimately belonged to this city, but which unfortunately for them now found its way by circuitous and longer routes to other ports, would shortly be restored to them by direct railway communications on the broad gauge as it formerly flowed to them by direct road communications. (Applause)

Mr.

Mr *Damodar Thakersey Mooljee*, in seconding the resolution, said that the extension of railways in this country was absolutely necessary if they were to increase their trade. He was sure any one who had travelled in the interior, where there were no railways, must have been surprised that any considerable trade at all could be carried on by the primitive mode of conveyance in vogue. It was absolutely impossible to raise the money in India for the construction of railways. The spare capital in the hands of people was absorbed in commercial and industrial enterprises. There was not the large accumulation of capital in this country waiting for safe investments that there was in England. Natives would certainly object to invest their money in a concern where they could only be guaranteed about 4 per cent. They would by far prefer to risk it in enterprises where although they might run the risk of losing it, they would at the same time stand a chance of getting 10 or 12 per cent. The speaker further said that they were not advocating more railways in India for military or political reasons, but they wanted them to be laid through districts where there was a large traffic.

Mr. *Forrest*, in supporting the resolution, trusted the committee of the Chamber would send the memorial to the leading association of steamship owners at home. They were most influential, as could be seen from the way the Suez Canal difficulty had been arranged by them, which agreement was as satisfactory an arrangement as a compromise could have been expected to be. Their assistance would be very valuable. They were particularly interested in the development of India by means of the extension of railways. The great increase in the steam tonnage of the world was due, to some extent, to the increased exports of India, and the latter had benefited to an enormous extent by the competition which had forced down freights to such a low level. He hoped they would urge the Indian Council to make all trunk lines on the broad gauge. It was difficult to say whether the working expenses of the broad or narrow gauge were the lowest, but there was no doubt of the inconveniences which attended a break of gauge. His own firm were suffering at that very moment from the way in which cotton from Delhi was being delivered, part of a consignment one day, another the following, and a third the day after. He hoped the Chambers at home would urge the immediate construction of the Jhansi and Gwalior line. The Bombay Chamber of Commerce had often need to complain of the policy and of the management of the G. I. P. Railway, but they felt that a great injustice had been done to that Company in the way they had been treated by the Secretary of State for India. For two years they had discussed the question with the Indian Council, and finally everything had been settled, even to small details, when, owing to the exigency of party politics, the Secretary of State had suddenly turned round and said nothing would be done until the Parliamentary Commission had sat. It was a crying shame that the interests of India should be thus sacrificed, and the improvement and development of the country delayed unnecessarily for so many years. As regards the advantages of borrowing in rupees or sterling, it was evident from Mr. Westland's minute that the former was impossible at any rate as regards obtaining the money in India. Even if the rupee loan was raised in England, the rate of interest must be 4½ per cent. against 3½ per cent. on a sterling loan. This difference alone amounted to the equivalent of a fall of about 26 per cent. in exchange, and such a decline was very unlikely. Out of the difference the Indian Government could raise a sinking fund to pay off the loan, should it be required, and should exchange have fallen below the current level. He hoped the memorial would receive the strong support of the different mercantile and shipping chambers and associations at home.

The proposition, on being put, was carried unanimously.

The meeting then separated, after the usual vote of thanks to the Chairman.

Appendix, No. 6.

MINUTE OF DISSENT TO DESPATCH of 16th August 1883

I DESIRE to record my dissent from the Despatch on "Public Works Policy," which was passed in Council on Wednesday last. It seems to me that though the reference to the recent Vote of the House of Commons, and to the proposed Parliamentary Committee of Inquiry, supplies an excellent answer to the somewhat extravagant general proposals made by the Government of India in their Despatch dated 23rd January 1883, No. 29, in regard to the outlay of several millions in the construction of railways, many of them likely to be unremunerative, it furnishes no sufficient reply to the definite and more moderate proposals made in paragraphs 26 and 27 of that Despatch. In these paragraphs, the Government of India recommend that four important lines of railway, extending to 1,484 miles, and estimated to cost about 12 millions sterling, should be constructed on the Central Bengal terms, if no better terms can be obtained. As regards two of these lines, viz., the Bombay and North Western (connecting Gwalior with Bhopal) and the Central India Railway (from Calcutta direct to Nagpore), the Secretary of State has for some time been negotiating with the promoters, and telegrams have been recently received from the Government of India urging despatch, and I can see nothing in the recent Vote of the House of Commons which can in any way be held to require the Secretary of State to discontinue these negotiations, to do so would be, it seems to me, to put a stop for the next 18 months to the policy deliberately decided upon by the late Secretary of State in Council only two and a half-years ago, to the effect, that every endeavour should be made to encourage the raising of capital through private agency for the construction of railways in India. This policy was inaugurated in Lord Hartington's Despatch to India of 6th January 1881, in which it was pressed upon the Government of India in the strictest terms. It was stated that any step in the direction of raising railway capital through private agency on the exclusive security of the success of the undertaking would meet with cordial support and co-operation from the Home Government, and that in the event of its becoming apparent that the execution of this policy in its integrity was impracticable, it might become desirable to consider whether a modified system of guarantee might not be advantageously adopted. It was explained that what was meant by a modified guarantee, was one so restricted as to time, and the rate of interest guaranteed, as to give the subscribers a real interest in the efficient and economical administration of the railway. Six months' experience apparently satisfied the Secretary of State in Council that without some such modified guarantee as had been suggested, nothing could be done in the direction desired, for the first company formed on the new basis in July 1881 was the Central Bengal Railway Company, with a guarantee of 4 per cent. from the State, during the construction of the line, on the million and a quarter raised by the company. In June of the following year the Southern Mahratta Railway Company was started on much more onerous terms to the State. A capital of three millions was raised by the company on a perpetual guarantee of 3½ per cent, with the further conditions that the rate of interest paid to the shareholders by the State should be made up to 4 per cent during the construction of the line, and that after completion they should have one-fourth of the net earnings of the line, in addition to their 3½ per cent. As it may be assumed that these lines will earn at least 2 per cent. this is equivalent to a perpetual guarantee by the State of 4 per cent. on the capital paid, with the prospect of 4½ should the line ever earn 4 per cent. It will be observed, that in the one case the State will make a permanent annual payment of 2 per cent. on three millions, and in the other half per cent. on the same sum, for which it will secure no return beyond any incidental advantages to be obtained by the construction of the railway. In July of the same year the Rohilkund Kumaon Railway Company was started by the Government of India with a capital of 200,000*l.*, on which a guarantee of 4 per cent. during construction was conceded, as well as an annual subsidy equal to about 2 per cent. on the capital for 10 years after the opening of the line; and in October, the Bengal and North Western Railway Company succeeded in raising their capital, amounting to about 2½ millions, without any guarantee from Government, about the same time the Bombay and North Western Company and the Palamou Company entered into negotiations with the Secretary of State in Council, with the view of raising their capitals, amounting respectively to four millions, and half-a-million, upon similar terms, but they eventually modified these proposals chiefly in consequence of the demands made upon them in other respects. Such then has been the history of our endeavour during the past two and a-half years to induce private capitalists to undertake the construction of railways in India. We have succeeded in starting one company, with a capital of 2½ millions, without any guarantee of interest, two other companies, representing capital amounting to 1½ million, with a limited guarantee of 4 per cent. during construction; and a fourth company, with a capital of three millions, and what may be viewed as a permanent guarantee of 4 per cent. Had we been a little more liberal in regard to the subsidiary terms of the proposed contracts we might probably have

have also secured the services of two more companies, with capital amounting to 4½ millions, on which no guarantee would have been asked for. It seems quite clear to my humble judgment that there is nothing in the experience which we have gained during this period, or in the present position of the stock of the several companies started to show that there is the least prospect of our now succeeding in obtaining from the two last-mentioned companies, or from any companies hereafter to be formed, terms more favourable than those which we have granted to the Bengal Central Company, and if this is the case, it would be hardly consistent with our policy, as declared in our Despatches to the Government of India, and in the public utterances of the late Secretary of State on the subject, to do less than to offer these terms to any company willing to accept them, and ready to undertake the early construction of those lines of railway which the Government of India press upon us as being essential to the future prosperity of the Empire. In his Budget speech of 1881, Lord Hartington expressed his concurrence in the views of the Parliamentary Committee of the previous Session to the effect, that it was inexpedient to expend more than 2½ millions of borrowed money on the construction of public works in India, but he went on to say, that this sum was neither sufficient to develop the resources of the country, nor to furnish the needful security against famine, and that therefore it was a matter for congratulation that at last there was some hope of private capital being forthcoming for these purposes, and that one railway (the Bengal Central) had already been started, with some slight assistance from the State, but much more in the nature of a private enterprise than were any of the old guaranteed lines. Again, at Manchester, in December of the same year, he expressed his fervent hope that private enterprise and private capital would come to the assistance of the Government of India in the construction of public works, and his belief that India offered a better security for the investment of capital on public works, than many foreign countries where English capital had been invested in this manner. He instanced the Bengal Central Railway as the kind of line which might be properly undertaken by private capitalists, and he expressed a hope that the experiment of entrusting the construction of such line to private enterprise would at any rate be fully tried. I have already alluded to the Despatch of January 1881 on the subject, and, in my opinion, the Despatch of December of the same year (No 365), which was the only one forwarded on the same subject up to the present date, in no way modifies the instructions issued. It is true that in paragraph 13, strong reasons are given against giving even a limited guarantee on capital for the construction of works of a protective nature which are not likely to yield 4 per cent on the capital outlay, but it is clear from paragraphs 14, 15, 16, which follow, that no such objection was entertained in regard to such a guarantee on a work which could be properly classed as "productive," and indeed great satisfaction is expressed in regard to the terms granted to the Bengal Central Railway, which included a guarantee of this description. Under all the circumstances of the case, I cannot but conclude that the Council were right in recording their vote as they did by nms to four, at the meeting of 3rd July 1883, in favour of sanctioning, where necessary, a limited guarantee similar to that granted to the Bengal Central Company, and that a grave responsibility will now be incurred both on grounds of inconsistency and impolicy, if the flow of private capital to India is permanently checked by declining to make this concession in those cases in which it is urged upon us by the Government of India.

(signed) *R. A. Dalryell.*

I concur in the above,

(signed) *Fred. Jas Halliday.*

18th August 1883.

Appendix, No. 7.

PAPERS handed in by Mr. James Westland, 27 May 1884.

1.—STATISTICS OF INDIAN RAILWAYS.

	Capital Outlay to 31st March 1883				Total Remittances of Interest to England since 1849-50	
	By Companies in England	By Indian Government			Sterling	Rupees.
		Cost of Land, &c.	Loes by Exchange.	Construction (including Land)		
Guaranteed Companies - - - -	£ 67,431,448	Rs 3,68,84,845	Rs 2,69,59,441	- Rs.	} 87,079,808	95,12,81,398
East Indian Railway -	80,879,696	89,61,615	1,96,55,455	- - -		
Old Contract - - - -	- - -	- - -	10,57,583	1,17,61,420		
New Contract - - - -	- - -	- - -	- - -	- - -		
	98,311,144	3,58,46,460	4,06,72,479	1,17,61,420	91,608,497	100,61,92,088
State Railways - - - -	- - -	- - -	1,13,06,514	32,28,20,060	- - -	- - -
Frontier Railways - - - -	- - -	- - -	28,22,561	4,11,21,470	- - -	- - -
Protective Railways - - - -	- - -	- - -	1,72,621	48,64,500	- - -	- - -
	- - -	- - -	1,49,01,696	86,87,96,090	- - -	- - -
TOTAL - - - -	98,311,144	3,58,46,460	5,49,74,175	38,05,67,440	91,608,497	100,61,92,088

NATIVE LINES.

Capital Cost till 31st December 1882 - - - - - Rs 2,55,03,000
 Net Profits in 1882 - - - - - 8,79,988.

2.—STATISTICS OF INDIAN RAILWAYS

	Years.	Gross Receipts.	Charge for Interest.		Surplus Profits - India.	Cost of Land, &c - India.	Working Expenses - India.
			England	India.			
			Rs	Rs			
Guaranteed Railways -	1882-83	7,81,34,970	£ 3,309,834	Rs 80,580	Rs 48,65,900	Rs 7,21,820	Rs 4,23,14,510
	1883-84	7,80,00,000	3,284,300	57,000	57,00,000	7,15,000	4,11,00,000
East Indian Railway -	1882-83	4,60,10,580	848,092 ^(a)	Rs 13,85,710	Rs 24,71,540	- - -	Rs 1,82,22,440
		+ £ 230	1,216,735 ^(a)	- - -	- - -	- - -	- - -
	1883-84	5,03,00,000	811,400 ^(b)	Rs 19,14,000	Rs 21,55,000	- - -	Rs 1,83,00,000
		+ £ 200	1,203,300 ^(b)	- - -	- - -	- - -	- - -
State Railways							
Productive - - - -	1882-83	2,64,63,270	- - -	Rs 1,32,67,020	- - -	- - -	Rs 1,53,41,760
	1883-84	3,08,73,000	- - -	1,32,10,000	- - -	- - -	1,69,10,000
Others - - - -	1882-83	13,87,920	- - -	- - -	- - -	- - -	Rs 15,01,220
	1883-84	17,49,000	- - -	- - -	- - -	- - -	17,09,000

(a) Includes Sinking Fund, 30,893 l.

(b) Includes Sinking Fund, 35,163 l.

3.—STATISTICS OF INDIAN RAILWAYS.

	Years	Gross Receipts.	Charges.		Net Earnings.	Distribution of Net Earnings.		
			Working Expenses.	Cost of Land and Control.		Paid to Company		Remaining to Government.
						Interest in Rupees.	Surplus Profits.	
Guaranteed Railways	1882-83	Rs 7,81,34,970	Rs 4,23,14,510	Rs 7,21,820	Rs 3,50,98,640	Rs 4,08,16,798	Rs 48,65,900	Rs 1,05,84,058
	1883-84	7,80,00,000	4,11,00,000	7,15,000	3,61,85,000	4,04,77,928	57,00,000	89,28,923
East Indian Railway	1882-83	4,60,13,410	1,82,22,440	- - -	2,77,90,970	2,06,45,119	24,71,540	46,74,311
	1883-84	5,03,02,460	1,83,00,000	- - -	3,20,02,460	2,05,56,460	31,55,000	32,91,000
State Railways								
Productive - - - -	1882-83	2,64,63,270	1,53,41,760	- - -	1,11,21,510	1,22,67,020	- - -	11,45,570
	1883-84	3,08,73,000	1,69,10,000	- - -	1,39,58,000	1,32,10,000	- - -	7,53,000
Others - - - -	1882-83	13,87,920	15,01,220	- - -	1,13,300	- - -	- - -	- - -
	1883-84	17,49,000	17,09,000	- - -	40,000	- - -	- - -	- - -

Interest at 4 per cent. on Capital Expenditure (see former charge).

PAYMENTS OF INTEREST ON INDIAN DEBT in each Year

YEAR.	On account of Ordinary Debt.			On account of Productive Public Works.			T O T A L.			Exchange on English Payments at average Rate of the Year	TOTAL, reduced to Rupees.
	England.	India.	TOTAL.	England.	India.	TOTAL.	England.	India.	TOTAL.		
1870-71 -	£ 2,349,524 (a)	£ 2,813,377	£ 5,162,901	-	£ 160,929	£ 160,929	£ 2,349,524	£ 2,974,306	£ 5,323,830	Rs. 15,66,350	Rs. 5,48,04,650
1871-72 -	2,437,036 (a)	2,829,628	5,266,664	-	216,854	216,854	2,437,036	3,046,482	5,483,518	6,51,614	5,54,86,794
1872-73 -	2,466,905 (a)	2,541,648	5,008,553	-	293,116	293,116	2,466,905	2,834,764	5,301,669	13,55,442	5,43,72,132
1873-74 -	2,434,297 (a)	2,406,650	4,840,947	-	407,873	407,873	2,434,297	2,814,623	5,248,920	17,57,926	5,42,56,126
1874-75 -	2,190,547	2,378,010	4,468,557	-	563,930	563,930	2,190,547	2,841,940	5,032,487	18,56,396	5,21,81,266
1875-76 -	2,160,855	2,282,919	4,443,774	-	734,334	734,334	2,160,855	3,017,268	5,178,108	23,73,193	5,41,54,273
1876-77 -	2,316,963	2,195,769	4,512,732	-	895,933	895,933	2,316,963	3,091,692	5,408,655	39,55,790	5,80,42,340
1877-78 -	2,492,282	2,180,186	4,672,468	-	1,067,940	1,067,940	2,492,282	3,248,108	5,740,390	39,03,674	6,13,07,474
1878-79 -	2,593,112	1,981,957	4,575,069	-	1,407,824 (b)	1,407,824	2,593,112	3,389,781	5,982,893	55,80,115	6,54,09,045
1879-80 -	2,705,976	1,884,506	4,590,482	34,397	1,582,114 (b)	1,616,511	2,740,373	3,466,620	6,206,993	55,32,208	6,76,02,138
1880-81 -	2,341,218	1,327,377	3,668,595	343,869	2,037,876 (b)	2,381,745	2,685,087	3,365,853	6,050,940	54,30,598	6,59,29,998
1881-82 -	2,512,420	1,511,696	4,024,116	352,862	1,986,173	2,339,035	2,865,272	3,497,869	6,363,141	58,92,475	6,95,23,885
1882-83 -	2,481,147	1,516,322	3,997,469	348,092	2,169,788	2,517,880	2,829,239	3,686,110	6,515,349	64,73,300	7,16,26,790
1883-84 -	2,442,900	1,364,700	3,807,600	311,400	2,358,100	2,669,500	2,754,300	3,722,300	6,477,100	63,01,888	7,10,72,838

(a) Includes dividend on East India Company's Stock.

(b) At 4½ per cent.

STATEMENT OF OUTSTANDING DEBT OF INDIA

YEAR ended	Ordinary Debt.			Debt on account of Productive Public Works.			T O T A L.		
	England.	India.	Both.	England.	India.	Both.	England.	India. (a)	Both.
31 March 1870 -	£ 35,217,617	£ 62,062,725	£ 97,270,342	-	£ 3,439,327	£ 3,439,327	£ 35,217,617	£ 65,492,052	£ 100,709,669
" 1871 -	37,627,617	62,101,150	99,728,767	-	4,607,137	4,607,137	37,627,617	66,708,287	104,335,904
" 1872 -	39,012,917	61,631,961	100,644,878	-	6,235,611	6,235,611	39,012,617	67,867,572	106,880,189
" 1873 -	39,012,617	57,936,819	96,949,436	-	8,420,180	8,420,180	39,012,617	66,366,999	105,369,616
" 1874 -	41,117,617	54,342,434	95,460,051	-	11,973,487	11,973,487	41,117,617	66,315,921	107,433,538
" 1875 -	48,597,033	53,525,531	102,122,564	-	16,223,058	16,223,058	48,597,033 (b)	69,748,589	118,345,622 (b)
" 1876 -	49,797,033	52,177,924	101,974,957	-	20,493,687	20,493,687	49,797,033	73,671,611	123,468,644
" 1877 -	55,397,033	47,518,785	102,915,818	-	24,302,971	24,302,971	55,397,033	71,821,756	127,218,789
" 1878 -	59,677,033	46,759,127	106,436,160	-	29,094,023	29,094,023	59,677,033	74,853,150	134,530,183
" 1879 -	60,029,117	45,261,635	105,290,752	-	33,475,921	33,475,921	60,029,117	78,737,556	138,766,673
" 1880 -	61,289,617	45,765,955	107,055,572	9,555,999	37,005,174	46,571,113	70,855,556	82,771,139	153,626,695
" 1881 -	61,881,950	39,555,969	101,437,919	9,547,183	46,302,407	55,849,590	71,429,133	85,868,376	157,287,509
" 1882 -	58,032,969	38,985,026	97,018,995	10,107,978	49,668,138	59,776,116	68,141,947	88,653,164	156,795,111
" 1883 -	58,027,184	36,835,849	94,863,033	10,558,510	53,852,917	64,411,427	68,585,694	90,688,766	159,274,460
" 1884 -	57,018,309	35,836,267	92,854,576	11,090,528	57,352,699	68,443,227	68,108,837	93,188,966	161,297,803

(a) Correction of — 101,370 L noted in accounts of 1881-82, carried back

(b) Includes 4,079,416 L capital value of dividend on East India Company's Stock, redeemed by creation of debt in 1874-75.

Appendix, No. 8.

PAPER handed in by Mr. Westland.

LOSS and GAIN ON STERLING BORROWING.

(The amounts in this paper are stated in thousands, /000 being omitted)

1 THOSE who claim that an actual gain or saving accrues to the Government by the substitution of sterling borrowing for rupee borrowing for expenditure in India, reckon the gain under the following heads :—

(1.) A saving of the charge for "loss by exchange," arising from the fact that a smaller amount has to be remitted to meet sterling demands in the year in which the borrowing takes place.

(2.) A gain by reason of the rate of exchange on the amount so remitted being made more favourable to Government by the reduction of the total drawings.

(3.) A saving by reason of the smaller rate of interest demanded upon the loan.

2. I propose to investigate these in turn, and to show that—

No 1 is quite unreal, and arises solely because our accounts are set forth on a plan which involves certain errors. These errors are systematically adjusted at present, but would cease to be so if money were borrowed in England for Indian expenditure.

No. 2 is a gain, which, however, is completely and exactly set off by a corresponding loss.

No. 3 is liable to considerable reduction, in consequence of the probability of future fall of exchange.

3. The ordinary position and transactions of the Government of India, for one year, may be stated as follows :—

	Thousands of Rupees in India.		Thousands of Pounds in England.	
	Receipts	Outgoings.	Receipts	Outgoings.
	<i>Rs</i>	<i>Rs</i>	<i>£</i>	<i>£</i>
Revenue - - - - -	680,000	- - -	2,000	—
Expenditure - - - - -	- - -	524,000	- - -	15,000
Public Works Capital Account - - - - -	- - -	25,000	—	—
Borrowed - - - - -	25,000	—	—	—
Remitted - - - - -	- - -	155,000	13,000	—
TOTAL - - -	705,000	705,000	15,000	15,000

That

That is, on the revenue account we have net receipts 156,000 rupees in India against net expenditure 13,000 *l* in England, and the question of deficit or surplus is to be judged by the question whether 156,000 rupees, or 13,000 *l*, is the more.

4. Now, making up the account into a real total, by reducing rupees to the denomination of pounds sterling at 20 *d*. the rupee (assuming for the moment that 20 *d*. is the exchange equivalent), we would get the following account.

	India.		England.		TOTAL.	
	Receipts	Outgoings.	Receipts.	Outgoings.	Receipts.	Outgoings.
	£	£.	£.	£.	£	£.
Revenue - - - -	58,667	- -	2,000	- -	58,667	-
Expenditure - - - -	- -	43,667	- -	15,000	- -	58,667
Public Works Capital - - - -	- -	2,088	- -	- -	- -	2,088
Borrowed - - - -	2,083	- -	- -	- -	2,083	-
Remitted - - - -	- -	13,000	13,000	- -	13,000	13,000
TOTAL - - - -	58,750	58,750	15,000	15,000	73,750	73,750

And this is a true statement of the position in pounds sterling, showing an equilibrium of revenue and expenditure

5 But in lieu of this, we agree to convert the rupees at *Rs.* 10 = 1 *l*., before adding them to the sterling, and this account, if made up directly, would be as follows.—

	India.		England.		TOTAL.	
	Receipts.	Outgoings.	Receipts.	Outgoings.	Receipts.	Outgoings.
	£.	£.	£.	£.	£.	£.
Revenue - - - -	88,000	- -	2,000	- -	79,800	-
Expenditure - - - -	- -	52,400	- -	15,000	- -	67,400
Public Works Capital - - - -	- -	2,500	- -	- -	- -	2,500
Borrowed - - - -	2,500	- -	- -	- -	2,500	-
Remitted - - - -	- -	15,600	13,000	- -	13,000	15,600
TOTAL - - - -	70,500	70,500	15,000	15,000	85,500	85,500

6. Now this account contains two misrepresentations. The rupee revenue and the rupee expenditure are both enhanced by 20 per cent., by being stated, and added in, as if 10 rupees were equal to 1 *l*. But the rupee revenue being greater than the rupee expenditure by the equivalent of 13,000 *l*., it receives a greater enhancement by 20 per cent. of 13,000 *l*., or 2,600 *l*. The result therefore is to overstate the revenue, as compared with the expenditure, by 2,600 *l*. (i.e., twenty-six hundred thousands of pounds)

7. The same thing is more conveniently put in another way, by considering the rupee account as the fundamental one, and the total as amounts of 10 rupees. We would then say, the English receipts and outgoings, which are really in pounds of 12 rupees, are understated by being set forth in pounds of 10 rupees. But the expenditure being greatly in excess of the revenue is understated by a larger amount than the revenue. In fact the revenue is understated by 400 *l*., whereas the expenditure is understated by 3,000 *l*., resulting, on the whole, in a net understatement of expenditure, as compared with revenue, by 2,600 *l*

8 If, therefore, you want to make a true comparison of the revenue and expenditure, you must enhance the latter by 2,600 *l*., that is, by the amount of the exchange upon the excess of English expenditure over English revenue

9 What I want to bring out is, that the amount which has to be added to expenditure, in order to make accounts which are drawn up at *Rs.* 10 = 1 *l* give a fair statement of expenditure

expenditure, as against revenue, is quite independent of the amount actually remitted from India to England

10 If we so arrange matters that we remit each year exactly enough to cover the difference between English expenditure and English revenue, then we obviously obtain a fair comparison of revenue and expenditure by adding to the expenditure the actual exchange upon the amount remitted, because this amount equals that which has to be added to bring out the comparison. Or, if without observing precise equivalence every year, we so regulate remittances on the average as to cover, one year with another, the excess expenditure, then, though each year's comparison is not precisely correct, yet on the average of years, the expenditure is, by the accounts, fairly set against the revenue

11. This is the way in which the accounts are at present constructed, that is, we add to the expenditure the actual charge for exchange on the amount remitted. The account as thus made up stands thus —

	India.		England.		TOTAL.	
	Receipts.	Outgoings.	Receipts.	Outgoings.	Receipts.	Outgoings.
	£	£.	£	£	£	£.
1 Revenue - - - -	68,000	- -	2,000	- -	70,000	-
2. Expenditure, excluding Exchange	- -	52,400	- -	15,600	- -	} 70,000
3. Adjustment of Expenditure -	- -	2,600	- -	- -	- -	
4 Public Works Capital - - -	- -	2,500	- -	- -	- -	
5 Borrowed - - - -	2,500	- -	- -	- -	2,500	-
6 Remitted - - - -	- -	13,000	13,000	- -	13,000	13,000
TOTAL - - - - £	70,500	70,500	15,000	15,000	85,500	85,500

12 The third item is here called "adjustment of expenditure," because that is what, as a matter of accounting principle, it ought to be, that is, the adjustment necessary to make the accounts, with their artificial system of adding together pounds of 10 rupees and pounds of 12 rupees show a proper comparison of expenditure with revenue. This adjustment is equal to the exchange charge, and the exchange charge may be substituted for it, *if the exchange charge is upon the full amount of remittance as above explained*. But it will be seen that accounts so made up are not correct,—they do not fairly set expenditure against receipts,—unless the amount remitted, on which exchange is reckoned, is equal to the excess of expenditure over revenue in England

13 If, for example, we borrow in sterling in England for expenditure in India, the amount remitted will be less than the excess of English expenditure, and the accounts will present an untrue result. Supposing the amount borrowed to be 2,083 £, the equivalent of the 25,000 rupees borrowed in the above statements of account, we now get the following as the true statement of account .—

	India.		England.		TOTAL.	
	Receipts.	Outgoings.	Receipts.	Outgoings.	Receipts.	Outgoings.
	£.	£	£	£.	£.	£.
Revenues - - - -	56,667	- -	2,000	- -	58,667	-
Expenditure - - - -	- -	43,667	- -	15,000	- -	58,667
Public Works Capital - - -	- -	2,083	- -	- -	- -	2,083
Borrowed - - - -	- -	- -	2,083	- -	2,083	-
Remitted - - - -	- -	10,917	10,917	- -	10,917	10,917
TOTAL - - - -	56,667	56,667	15,000	15,000	71,667	71,667

showing as before equilibrium of receipts and expenditure.

14. But

14. But made up under the existing system, the accounts will stand as follows:—

	India.		England		TOTAL	
	Receipts	Outgoings	Receipts	Outgoings	Receipts	Outgoings.
	£.	£.	£	£	£.	£.
Revenue - - - -	68,000	-	2,000	-	70,000	-
Expenditure, excluding Exchange.	-	52,400	-	15,000	-	-
Exchange - - - -	-	2,183	-	-	-	-
Public Works Capital - - - -	-	2,500	-	-	-	2,500
Borrowed - - - -	-	-	2,083	-	2,083	-
Remitted - - - -	-	10,917	10,917	-	10,917	10,917
TOTAL - - - -	68,000	68,000	15,000	15,000	83,000	68,000

15 Now upon this account, you appear to have a surplus of 417 *l*, and you appear to have saved this in the exchange; but this is certainly untrue, for the expenditure 15,000 *l*. in sterling and 52,400 *l*. in silver, is the full equivalent of the revenue, which is 2,000 *l*. in sterling and 68,000 *l*. in silver. This apparent saving of 417 *l*. has no tangible existence, and is merely the balance of two errors in the statement of the account, namely, the error of 2,600 *l*., in the statement of the expenditure (the same as before), and the error of 2,183 *l*., involved in putting down 10,917 sums of 10 rupees in the Indian column as the equivalent of 10,917 sums of 12 rupees in the sterling column.

16 The artificial system of account has the effect of distributing the differences which arise from the addition of pounds of 10 rupees to pounds of 12 rupees in varying ways, between the revenue and the debt and remittance accounts, but it obviously does not bring any actual gain into existence, and any argument founded upon the assumption that the above difference of 417 *l*. is a real gain or saving, or that it can be set aside and funded, is necessarily a false argument. This is quite obvious from the fact that when the accounts are made up by reducing the rupee and sterling to a common denomination before adding them, the supposed gain entirely disappears (*see* para. 13).

17 The first saving, then, arising out of sterling borrowing, namely, the alleged saving of exchange upon the remittance, otherwise required, of the amount borrowed, is altogether fictitious,—it is merely an error of statement arising from the artificial method in which the accounts are made up, a method which is good enough perhaps for showing the state of facts when there is no such borrowing, but which is based on the assumption of a condition with which such borrowing is inconsistent.

18. I come now to the second point in which it is alleged that a gain by exchange arises, namely, that by diminishing the amount of drawings, the rate at which the balance of sterling liabilities is remitted is improved. Here, also, I hold the gain to be completely met by a set-off.

I shall assume that a sterling loan of 2½ millions being raised, and the amount being diminished from the drawings, the rate is improved by one farthing. The gain, therefore, is one farthing on the amount of remittances required in the year in which the borrowing occurs. But, as this loan will have to be repaid some time, a time will come when the 2½ millions will have to be added to the drawings of the year, and this will, *ceteris paribus*, reduce the rate of exchange by just as much as the former operation added. So that the gain obtained at the time of borrowing will be taken up at the time of paying it off. Moreover, the Government has not even the consolation of enjoying the saved amount between the dates of borrowing and of paying off, for it has to add to the amount of remittances otherwise required, the amount required for the remittance of interest. If the interest is ½th of the principal (about 3½ per cent.), the remittance of it will presumably cause, upon the exchange operations of the year, ¼th of a farthing difference in the rate, that is, each year a loss equal to ¼th of the original gain, a complete and exact set-off against the advantage of having realized a gain which has to be discharged only after some years; that is, against the interest on the first realization.

19. I come to the conclusion, therefore, that the only gain which can be taken against the possible depreciation of silver, and the obligation to pay off the loan with a larger amount of silver than was received by it, is the difference in the rate of interest. If we raise sterling at 3½ per cent., and rupees at 4 per cent., the difference of burden is ½ cent at first, but as we may assume that silver will fall, a time may ultimately come when 3½ per cent. sterling will cost as much silver as 4 per cent. in silver; this time will

come when the rate has fallen from 1 s. 7½ d. to 1 s. 5 d. Allowing 10 years for the decrease, we may take the saving in each of the first ten years.

	Number of Year									
	1	2	3.	4.	5.	6.	7.	8	9	10.
Charge for 1,000 rupees raised at a silver charge of 40 rupees - - - Rs	40	40	40	40	40	40	40	40	40	40
Charge on 1,000 rupees raised at a gold rate of 35 rupees, at 19½ d										
Gold charge - - £	2 84	2 84	2 84	2 84	2 84	2 84	2 84	2 84	2 84	2 84
Exchange in pence - -	19½	19	18½	18½	18½	18	17½	17½	17½	17
Silver charge - - Rs	35 4	35 9	36 4	36 8	37 3	37 8	38 3	38 9	39 5	40 1
Saving to Government - - Rs	4 6	4 1	3 6	3 2	2 7	2 2	1 7	1 1	0 5	—0 1
Ditto, accumulated to end of 10th year - - - Rs	6 3	5 4	4 6	3 8	3 2	2 5	1 9	1 2	0 5	—0 1
Total accumulated gain at end of 10th year - - -	-	-	-	-	-	-	-	-	-	29 4

20 These figures show that, upon the above supposition as to future fall of exchange, the result of the gain of ½ per cent. is to leave you at the end of the 10th year with an accumulated gain of 29 4 rupees for every 1,000 rupees, or 81½ L, which you originally borrowed.

21 If there is no further fall in silver, the interest charges will, after this point, remain the same under either supposition, but the 29 4 must accumulate for 46 years before it becomes equal to bearing the loss by exchange on the final repayment of the 81½ L which comes to 147 (that is, the repayment will cost 1,147 rupees against the 1,000 rupees received). On the other hand, a further fall will draw away part of the accumulation, first in extra cost of interest, and afterwards in loss upon repayment.

22 Suppose even that exchange continue to run down at the same rate for other 10 years, we continue as follows.—

	Number of Year									
	11	12.	13.	14.	15.	16.	17	18.	19	20
Exchange - - - -	16½	16½	16½	16	15½	15½	15½	15	14½	14½
Charge for 2 84 Interest - -	40 7	41 3	41 9	42 6	43 3	44 0	44 7	45 4	46 2	47 0
Loss to Government - - -	0 7	1 3	1 9	2 6	3 3	4 0	4 7	5 4	6 2	7 0
Accumulation to end of 20th year	0 9	1 7	2 4	3 2	3 9	4 6	5 3	6 1	6 4	7 0
Total accumulated loss to end of 20th year	-	-	-	-	-	-	-	-	-	40 1
Saving at end of 10th year 29 4 accumulated to end of 20th year	-	-	-	-	-	-	-	-	-	41 4

23 Thus a saving of ¾ per cent interest upon sterling borrowing as compared with rupee borrowing is sufficient to meet the whole of the loss arising during the next 20 years from the fact of the interest charge being fixed in sterling instead of in silver, even on the supposition of the rate of exchange falling at the rate of ½ d. a year from 19½ now, to 14½ at the end of 20 years, but it contributes nothing towards loss on final repayment.

24. The calculation in paras 19 and 22, if made on the supposition of an annual fall of exchange of ½ d. for 20 years, gives an accumulation of gain at the end of 20 years of 75 rupees, which, if 1 s 5 d were the permanent rate after that time, would cover the loss upon repayment at the end of 20 years more, or 40 in all.

25 If the comparative gain in interest is $\frac{1}{4}$ per cent. only, then, with the same suppositions as in para. 19, the saving on the payment of interest during the first 10 years is as follows.—

	Number of Year									
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Savings each year - Rs.	21	16	11	07	02	-03	-08	-14	-02	-26
Ditto, accumulated to end of 10th year - Rs.	99	21	14	09	02	-03	-09	-15	-03	-26
Total accumulation - Rs.	-	-	-	-	-	-	-	-	-	20

26 Here the saving during the first five years is just sufficient to meet the loss caused during the next five, arising from the fall of exchange having caused the charge for $3\frac{1}{2}$ per cent., sterling to exceed that for $3\frac{3}{4}$ per cent silver. It provides nothing for excess cost of subsequent repayment, and even all future interest charges are a loss.

27 It is useless to work out further examples, the above three show the nature of the problem, namely, that it depends more upon the amount of the probable fall of silver than upon any element which can be subjected to calculation.

28 The figures seem to me to show that when the difference of interest is $\frac{1}{4}$ per cent. the saving accruing in respect of the rate of interest is sufficient to cover, so far as interest goes, almost any reasonable supposition as to the loss accruing by fall of exchange, and even to contribute something towards loss on final repayment.

6 May 1884

(signed) J. W.

EXPLANATION OF PROVINCIAL DEFICITS AND SURPLUSES.

	1878-79	1879-80	1880-81	1881-82	1882-83	1883-84.
Transfer of Funds from Provincial to Imperial —	£.	£.	£.	£.	£.	£.
1 Contribution towards war -	-	385,000	-335,000	-670,000	—	—
2. On occasion of new Provincial Contract	-	-	-	-360,000	198,800	—
3 In connection with remissions of Revenue in Bombay	-	-	-	-251,300	93,400	141,000
4 Provincial deficit caused by above transfers.	-	335,000	335,000	Surplus. 1,281,300	294,300	141,000
5 Additional expenditure upon Productive Works Capital.	-	-	55,000	-	205,900	619,800
6 Total deficit accounted for -	-	335,000	380,000	Surplus. 1,281,300	500,100	760,800
7 Total surplus or deficit by accounts.	+715,300	+613,300	+297,900	+1,519,900	-1,202,600	-1,106,300
8 Remains to be accounted for -	+715,300	+948,300	+687,900	+238,500	-702,500	-345,500
9 Provincial expenditure on Ordinary Public Works.	3,059,300	2,689,600	3,216,300	4,021,300	4,561,400	4,117,300—484,900*
10 Amount altered by the above remainder of surplus or deficit, so as to show the amount, the spending of which would have extinguished the said remainder	3,674,600	3,637,900	3,934,200	4,269,800	3,858,900	3,771,800—484,900*

* The 484,900 / is outside the expenditure of the year, being the amount spent before 1883-84, but transferred in the accounts of that year to Productive Capital.

Appendix, No. 9.

PAPERS handed in by Mr. Westland.

PRESENT FINANCIAL POSITION OF THE GOVERNMENT OF INDIA.

(The following figures are £ (= Rs. 10), and in the Tabular Statements the last two digits are cut off.)

1. THE Revised Estimates of the Government of India for 1883-84 are for —

	Receipts.	Expenditure
India - - - - -	70,289,000	56,256,600
England - - - - -	280,900	15,148,100
TOTAL - - -	70,569,900	71,404,700

Expenditure in Excess - - - 834,800.

These may be divided into two parts, namely —

(Hundreds of £)	RECEIPTS		EXPENDITURE	
	India	England.	India	England.
	£.	£	£.	£.
A. Not immediately connected with Railways and Famine	58,631,8	278,0	50,440,8	10,632,6
B. So connected - - - - -	11,657,2	29	5,815,8	4,515,5
TOTAL - - - £	70,289,0	280,9	56,256,6	15,148,1

The details of these last figures are given in the first set of columns of Statement No. 1.

2. Before taking them up for examination it will be convenient to slightly re-arrange them, namely —

(1) By transferring Land Revenue due to Irrigation, 542,8 to the ordinary head of Land Revenue

(2) By transferring the portion of Interest on Debt charged against Productive Public Works to the ordinary head of Interest on Debt The amount is 2,669,5, viz, 311,4 in England, and 2,358,1 in India.

(3) By taking all irrigation receipts and expenditure along with Public Works not classed as productive, the amounts are 944,5 receipts, and 519,0 expenditure, both in England

There are conveniences, in regarding these items for statistical purposes, under the heads to which we propose to transfer them, so as to avoid consideration of differences arising from mere diversities in distribution

3. These transfers being made, we get the second set of figures in Statement No. 1, as a slightly redistributed statement of the Revised Estimates of 1883-84.

4. I propose first of all taking up the part of the Account marked A, so as to find what resources are available to the Government of India outside the question of Railways and of Famine, and whether in these respects the financial resources of the Government are better or worse than are indicated in the Revised Estimates of 1883-84.

5. The

5 The figures of every year are necessarily affected by a variety of circumstances which prevent their being adopted as a real standard of annual expenditure. I have taken up one by one the figures of the Revised Estimates of 1883-84, so as to compare them with what may be laid down as the normal and usual amount of revenue and expenditure, and the details of that comparison are shown in Statement No 2 for the whole of that part of the account which is not directly connected with Railways, or Famine

6 The results shown in that table may be abstracted as follows:—

(Hundreds of £)	Net Revenue or Expenditure by Revised Estimate of 1883 See Table 1		Normal Standard of Revenue and Expenditure (Net)-		Normal, better than figures of 1883-84.		Annual Rate of Improvement.
	India	England.	India.	England.	India.	England.	
Interest on Debt - -	-4,150.8	-2,759.4	-4,263.0	-2,750.3	-103.2	+9.1	0
Revenue Heads - -	+43,479.8	-36.6	+42,285.8	-41.0	-1,194.0	-5.0	360.0
Post Office, &c - -	-166.4	-231.9	-182.0	-222.5	-16.6	+9.0	0
Civil Departments - -	-9,301.5	-508.5	-9,355.2	-446.4	+26.3	+62.1	-96.0
Miscellaneous - -	-814.2	-1,781.7	-951.1	-1,035.1	-116.9	+36.6	0
Public Works* - -	-5,727.8	-79.4	-4,888.3	-75.0	+1,039.5	+4.4	0
Army - -	-11,200.1	-5,008.1	-11,800.0	-4,000.0	-99.9	+1,008.1	0
TOTALS - -	12,051.0	-10,354.6	11,586.2	-9,330.3	-464.8	+1,124.3	264.0

* This includes Productive Irrigation, but excludes all receipts and charges for Railways

7 As regards the annual rate of improvement to be expected, the figures 360,0 and -96,0 are detailed in Statement 3 In the case of interest, taking as we do the present position as our standard, there is no increase of principal, and any alteration of rate will necessarily be an alteration in the way of reducing the burden of the existing interest charge. The net burden of Post Office, Telegraph, and Mint is not likely to increase, because they are departments of which any increase of burden follows, or is calculated to produce, an increase of revenue. Under Miscellaneous, and under interest on "other obligations," I do not take any increase, because although pensions are likely to gradually increase, still any possible increase of charge will be met for a long time by the reduction below the present scale consequent on the adoption of new arrangements in respect of the Civil Funds Under Army, I also provide for no increase of charge, because the standard which I have adopted includes an annual payment of 800,000/ sterling to the War Office, which is much in excess of the actual burden of any present year, and the amount will in fact by any new arrangement be decreased.

8 The detailed examination and explanations connected with these figures are given in a separate paper

RECEIPTS AND CHARGES connected with RAILWAYS.

9 It is now necessary to state the existing financial position of Government as regards revenue and expenditure upon existing Railways.

10 The Revised Estimates of 1883-84 give the following as the receipts and charges directly connected with Railways -

(Hundreds of £.)	RECEIPTS.		EXPENDITURE.	
	India.	England.	India.	England.
Productive - -				
State - - - - -	3,087.3	—	1,691.0	—
East Indian - - - - -	5,030.0	2	2,045.5	—
Guaranteed - - - - -	3,365.0	—	611.5	—
Annuities - - - - -	—	—	—	1,203.3
Guaranteed Railway Interest - - - - -	—	—	5.7	3,284.2
TOTAL - - - -	11,482.3	2	4,383.7	4,487.5
Non Productive - -				
State Capital - - - - -	—	—	110.3—484.9	—
State Working - - - - -	174.9	—	170.9	—
Subsidised - - - - -	—	27	158.5	27.8
Frontier - - - - -	—	—	-22.5	—
	174.9	27	417.2—484.9	27.8
TOTAL - - - -	11,657.2	29	4,316.0	4,515.3

11. Some of these may be disposed of at once Under "State Capital" the estimate of expenditure of the year is 110,3 the 484,9 being a transfer to Productive Capital Account of expenditure incurred in former years The expenditure which falls under this head, and the method of treating it in the accounts, are among the questions now before the Committee, so that outside the questions before the Committee we may consider the charge to be nil.

The head of "State Working" may be stated in a little detail, as follows No non-productive State Railways were open till 1882-83, or rather the two railways whose working first came under this head, were lumped with Productive before 1882-83 The figures of that and subsequent years, both receipts and expenditure, are as follow —

	1882-83	1883-84
1. Bhopal - - - - -	1,4 —2,0	2,4 —2,0
2. Kandahar - - - - -	48,4 —51,4	42,5 —42,5
3. Punjab, Northern Section - - -	72,0 —84,8	70,0 —80,0
4. Provincial, Bengal - - - - -	16,1 —11,9	84,0 —10,5
5. Rewari-Ferozpur - - - - -	— —	46,0 —35,0
TOTAL - - - - -	188,8 —150,1	174,9 —170,9

The first and the fourth need not be considered, they represent merely the working of a few open miles on routes not yet nearly completed. No 2 and No 3 are lines constructed for military purposes, of which the utmost to be expected is that they will within a year or two pay the expense of their maintenance The Rewari-Ferozpur line is just beginning to be opened. On the whole head we may take the receipts as meeting the charges.

12. The frontier railway construction has for the present ceased We have provided 90,000 *l* in respect of communications on the Quetta frontier under the head of Ordinary Public Works.

13 The liabilities which Government have undertaken in respect of Subsidized Railways include the cost of land, and the cost of certain guarantees of interest.

The following are the figures of the last two years —

LAND		
	1882-83.	1883-84.
Bengal Central - - - - -	21,2	20,0
Rohilkund Kumaon - - - - -	0	2,3
Tarkessar - - - - -	1,1	5,2
Bengal and North-Western - - -	3,7	45,0
TOTAL - - - - -	26,0	72,5

This expenditure will soon cease, so far as these particular railways are concerned Future expenditure has to be considered as arising out of the proposals now before the Committee

14 Under the head of Interest there is a small charge in respect of the Rohilkund and Kumaon Railway, but besides that the only remaining one is that in respect of the (original) Southern Mahratta Railway. Assuming its capital to work up to three millions sterling, upon which 4 per cent. is temporarily guaranteed, the charge to Government will, for the present, be a maximum of 120,000 *l* sterling, and it may be stated, apart from consideration of future profits, at 30,000 *l* sterling for every 1 per cent. by which the net earnings fall short of 4 per cent.

PRODUCTIVE WORKS—RAILWAYS

STATE RAILWAYS.

15 The following is a statement of net earnings for five years —

	1879-80	1880-81.	1881 82.	1882-83.	1883-84	Miles Open	
						1st April 1881	1st April 1884.
Rajputana - - - -	168,6	181,8	430,8	524,6	630,0	1,015	1,257
Sindia - - - -	—2,2	3,0	9,1	8,2	14,2	66	75
Wardha Coal - - - -	1	—20,1	8,3	21,3	58,0	46	46
Punjab Northern - - - -	6,0	94,6	40,2	55,6	75,0	—286	448*
Indus Valley - - - -	70,7	201,1	136,6	200,2	295,0	508	508
Dhond and Munnad - - - -	—6,4	6,0	14,0	16,0	18,8	146	146
TOTAL IMPERIAL - - - -	237,8	466,4	639,0	826,4	1,091,0	2,067	2,480
Nagpur-Chattargarh - - - -	—	4,5	17,3	36,8	66,0	66	149
Rangoon-Irrawadi - - - -	30,9	58,2	63,2	59,9	67,5	161	253
Calcutta and South-Eastern - - - -	3,4	5,7	—3,7	7,8	11,5		
Nalhati - - - -	3,1	—	1,3	2,3	1,8		
Turhoot - - - -	13,4	22,7	23,0	27,0	29,0	441	622
Northern Bengal - - - -	23,9	77,9	96,7	124,9	96,0		
Patna-Gya - - - -	15,3	22,2	19,5	12,7	23,1		
Muttra-Hathras - - - -	5,7	6,0	2,5	4,2			
Cawnpur-Farrukhabad - - - -	—	1,7	10,6	12,2	19,5	127	150
Ghanpur-Udadhargar - - - -	—	—3	5	7	2,2		
Achneyra-Muttra - - - -	—	—	2	1,3	—	—	—
Amritsar-Patankote - - - -	—	—	—	—	—1,3	—	51
TOTAL PROVINCIAL - - - -	95,7	195,0	231,1	285,7	305,3	798	1,225
TOTAL - - - -	333,5	661,4	870,1	1,112,1	1,396,3	—	—

* Includes Northern Section, which is not productive

16 Part of the increase, from year to year, has arisen through opening of additional mileage, but the comparative figures in the last columns show that during the last three years, at least, this cause of increase has not been the principal one

17 Under Imperial especially, the net receipts have in three years risen from 466,4 to 1,091,0, almost entirely by development of traffic, arising very largely from the opening of the Rajputana through line

18 The figures show that we have, in the existing open mileage of State Railways, an assurance of net revenue of about 1,400,000*l.*, with an annual increase of say, 150,000*l.* The increase in three years has been 730,000*l.*, or at the rate of over 240,000*l.* a year, and as not only are these existing railways in their infancy, but over 400 miles are expected to be added to their length (apart from new railways) in 1884-85, 150,000*l.* seems a moderate estimate of the annual increase during the next few years, but I shall take 100,000*l.* only

EAST INDIAN RAILWAY

19 The figures of this railway are —

	Gross Earnings	Working Expenses.	Net.	Deduct Company's Share of Profits, &c. (New Contract)
1878-79 - - - -	4,405,4	1,861,9	2,543,5	—
1879-80 - - - -	4,611,9	1,516,5	3,095,4	—
1880-81 - - - -	4,271,5	1,482,3	2,789,2	125,0
1881-82 - - - -	4,740,1	1,478,3	3,261,8	199,3
1882-83 - - - -	4,601,3	1,822,2	2,779 1	247,2
1883-84 - - - -	5,030,2	1,830,0	3,200,2	215,5

The last two years have both included very heavy charges for special expenditure (heavy renewals, &c.) As this will not recur for a year or two, the revenue of this last year,

year, say net 3,000,000 *l.*, after payment of charges for surplus profits, seems to be assured. But as the last Budget Estimates take a smaller figure I shall state only 2,900,000 *l.*

20 The profits tend to increase, but have not done so latterly, as the increase has been swallowed up in special expenditure. Perhaps 50,000 *l.* a year may be taken as a moderate estimate.

GUARANTEED RAILWAYS

21 The following is a statement of the net earnings, and of the repayment of surplus profits —

	1879-80	1880-81.	1881-82	1882-83	1883-84
Bombay Baroda - - - - -	329,0	377,0	557,4	521,6	700,0
Eastern Bengal - - - - -	231,5	266,5	347,6	375,9	235,0
Great Indian Peninsula - - - - -	954,3	1,203,3	1,344,5	1,771,3	1,550,0
Madras - - - - -	226,4	197,6	215,0	249,3	245,0
Oudh and Rohilkhand - - - - -	154,1	207,2	205,5	155,2	260,0
Sind Punjab - - - - -	465,7	503,3	317,9	372,3	460,0—323,0
South India - - - - -	95,3	137,2	127,6	136,1	140,0
TOTAL - - - - -	2,476,3	2,894,6	3,615,5	3,582,1	3,690,0—321,0

22. The 325,0 deducted from the Sind, Punjab, and Delhi Railway is a write-back of an item that has nothing to do with the year's accounts. The various railways show some fluctuations, due to variety of seasons and trade. The wheat export raised to a high figure the receipts of 1881-82 and 1882-83, notwithstanding heavy expenditure in these years. The jute crop fell short in 1883-84, and this produced a great falling off in the receipts of the Eastern Bengal.

23 There seems no reason for taking for the normal revenue a lower figure than that which has been attained in the last three years, say 3,613,000 *l.* The Budget Estimate for 1884-85 is for this amount, after all allowance made for diminution in grain traffic.

24 The charges, of which the main one is the payment of surplus profits, amount upon this standard of revenue to about 580,000 *l.*

ANNUITIES AND INTEREST

25 The charge for annuities and for interest may be taken at the figures of 1883-84. The former stands at 1,203,3 sterling, and it is liable to alteration only by arrangements which diminish it by making a corresponding addition to interest on other debt. The Guaranteed Railway interest will be increased only by the outlay of additional capital upon the lines.

26. The result, therefore, of the examination of this part of the accounts is to show the following as the present measure of the revenue and expenditure directly connected with railways.—

	NORMAL FIGURES		REVISED ESTIMATES, 1883-84		Annual Rate of Im- provement
	India.	England	India	England	
Productive —					
State Railways - - - - -	+1,400,0	- - -	1,396,3	- - -	100,0
East Indian - - - - -	+2,900,0	- - -	2,984,5	- - - 2	50,0
Guaranteed - - - - -	+3,033,0	- - -	2,723,5	- - -	-
Annuities - - - - -	- - -	-1,203,3	- - -	-1,203,3	-
Guaranteed Railway Interest - - - - -	-5,7	-3,284,2	-5,7	-3,284,2	-
TOTAL - - - - -	7,327,3	-4,487,5	7,098,6	-4,487,3	150,0
Non-productive —					
State, Capital - - - - -	Nil - - -	- - -	- - -	- - -	-
State, Working - - - - -	Nil - - -	- - -	- - -	- - -	-
Subsidized - - - - -	- - -	- - -	242,6	-25,1	-
Frontier - - - - -	- - -	- - -	- - -	- - -	-
TOTAL - - - - -	7,327,3	-4,487,5	7,341,2	-4,512,4	150,0

27. Now,

27. Now, bringing together the figures stated in para. 6, those now shown for railways and those of the Famine Insurance Fund, we find the following statement of the revenue and expenditure of Government, from all its present sources, including existing railways and past railway capital expenditure as far as it has gone, but excluding the obligations it has accepted in respect to the Southern Mahratta Railway

(Hundreds of £)	Net Revenue or Expenditure by Revised Estimate of 1883-84		Normal Revenue or Expenditure of One Year, at present		Normal Figure, better than 1883-84		Annual Rate of Improvement.
	India	England.	India.	England	India.	England	
Not connected with Railways - -	12,051,0	-10,354,6	11,586,9	-9,230,3	-464,9	+1,124,3	+264,0
Connected with Railways - - -	7,341,2	-4,512,4	7,327,3	-4,487,5	-13,9	24,9	+150,0
Famine Insurance - - - -	-1,499,9	-2	-1,500,0	-	-2	+3	-
TOTAL - - -	17,892,4	-14,867,2	17,413,5	-13,717,8	-478,9	1,149,4	+414,0

28. The figures of the Revised Estimate proceed thus -

	£
India (as above) - - - - -	+ 17,892 400
England (as above) - - - - -	- 14,867,200
Exchange - - - - -	- 3,860 000
Net Result of the whole Year - - £	- 834,800

29 But this does not show the actual incidence of the charge for exchange, it merely shows the charge as regulated by the amount of remittances which may be more or less than the amount required for meeting the charges of the year

30 The real burden of the charge for the exchange is,—

(1) The charge for remitting the amount required for the expenditure against revenue, in the home amounts This part is best shown by converting the sterling at the actual, instead of at the assumed rate of exchange, and the conversion of 13,717,800 (net normal home expenditure) at 19½ d (the rate prevailing now for two or three years) is sterling 13,717,800 = 16,883,800 tens of rupees.

(2) The cost of certain privileges of exchange granted to Civil Funds, Military Officers, &c This does not appear anywhere upon the accounts as now kept, but the limit of it is 60,000 l The total yearly remittances are about—

	£
For Civil Funds - - - - -	230,000
Military Remittances - - - - -	300,000
TOTAL - - £.	530,000

On which the exchange charge would be 106,000, but as 32,000 appears as a recovery in India, the net charge would be only 74,000. The new remittance regulations will much diminish this.

(3) The obligations in respect of guaranteed railways All obligations in respect of revenue transactions are already in the figures we have taken for the revenue account, and the addition now to be made is merely the result of the agreement to issue a rupee for capital expenditure in India, for every 1 s 10 d received for the purpose in England.

31 The capital transactions in the sense of issues for capital expenditure in India are very small Up to 31st March 1880 the companies had withdrawn 65,907,300 l on capital, and on 31st March 1883 the figure was 67,431,400 l, giving net withdrawals for three years 1 524,100 l, of which half was on account of the Oudh and Rohilkund Railway, which has now recommenced construction Of this amount part only was in India, and the annual amount may be stated at 300,000 l The issue of this amount at the contract exchange rate gives to Government a gain of 25,000 l, but the gain is temporary only, for Government has, on the other hand, to pay the interest upon every rupee of expenditure at a sterling rate calculated as if the rupee were 1 s 10 d or 2 s.

32. I do not, therefore, take this gain into the reckoning.

33. The result, therefore, on the whole account is that—

(1) The Government of India at present, 1883-84, receives a net revenue in India of about 17,41,35,000 rupees.

(2) Out of this it has to meet net expenditure in England of about 13,717,800 £, which at 1 s. 7½ d. exchange will cost it about 16,88,38,000 rupees.

(3) It has also to make certain remittances to England at privileged rates, which will cost it about 5,00,000 rupees.

(4) This leaves it a surplus of rupees in India of about 47,97,000 rupees.

(5) This surplus increases by about 41,40,000 rupees every year

(6) Every farthing fall of exchange costs Government directly about 22,00,000 rupees, so that if exchange were to fall a farthing every year, the annual gain on the present financial position would be reduced from 41,40,000 rupees to 19,40,000 rupees. But it should be remembered that a fall of exchange tends in itself to increase revenue.

34 The above figures are taken as safe estimates of the revenue and expenditure, and a low estimate of opium. They take no reckoning of arrangements with the Civil Funds, which may be expected to have the immediate effect of relieving the revenue account for many years to come of about 20,00,000 rupees to 25,00,000 rupees, and of arrangements for the payment of non-effective charges to the War Office, which will relieve the revenue account for a few years at least of 400,000 £ to 500,000 £ sterling

35. These figures, moreover, include the entire reservation of the 1,50,00,000 rupees famine insurance.

36 The following figures compare the actual accounts of 1881-82 and 1882-83, and the Revised Estimates of 1883-84, with the figures we have taken as "normal."

	Accounts of			Normal Figures.	Accounts better than Normal.		
	1881-82.	1882-83	1883-84.		1881-82	1882-83.	1883-84.
Interest, including Productive Public Works.	- 6,947,1	- 7,010,9	- 6,9'9,2	- 7,013,3	+ 66,2	+ 2,4	+ 94,1
Revenue - - - - -	+ 45,925,5	+ 42,945,7	+ 43,444,2	42,244,8	+ 3,680,7	+ 700,9	+ 1,199,4
Post Office, &c. - - - - -	- 282,0	- 199,5	- 397,3	- 404,5	+ 122,5	+ 205,0	+ 7,2
Civil Departments - - - - -	- 9,525,4	- 9,610,7	- 9,870,0	- 9,781,6	+ 256,2	+ 270,9	- 88,4
Miscellaneous - - - - -	- 2,337,3	- 2,511,9	- 2,545,0	- 2,636,2	+ 288,9	- 114,3	+ 80,2
Famine - - - - -	- 1,600,0	- 1,600,0	- 1,600,0	- 1,600,0	-	-	-
Productive Railways - - - - -	+ 2,630,0	+ 2,132,8	+ 2,611,3	+ 2,338,8	- 209,8	- 707,0	- 228,5
Other Railways - - - - -	- 487,8	- 807,6	+ 317,5	-	- 487,8	- 807,6	+ 217,5
Other Public Works - - - - -	- 4,777,2	- 5,104,3	- 5,507,2	- 4,763,3	- 17,9	- 341,0	- 1,043,9
Army - - - - -	- 15,099,6	- 15,848,0	- 16,208,2	- 15,700,0	+ 260,4	- 648,0	- 908,2
Exchange - - - - -	- 3,5'6,7	- 3,081,4	- 3,860,0	- 3,216,0	- 340,7	+ 174,6	- 644,0
TOTAL - - - - -	+ 4,102,6	- 496,0	- 834,8	+ 479,7	-	-	-

37 The following are the main explanations of differences, but they are given in great detail in the separate paper —

Revenue—3,680,7 Composed mainly of 2,749,0 revenue since remitted, and 7,805,0 net opium against the normal amount taken at 6,310,0.

700,9. Net opium is here 7,216,8, or 916,3 better than normal. Against these figures in both cases set excise revenue short of present normal standard, and special charges for refunds.

1,199,0. Again opium account is better by 1,311,0, but against these there are heavy charges for refunds.

Post Office, &c—The normal expenditure is taken high to provide for extensions of capital expenditure.

Civil Departments—The normal figures provide for some recent improvements in salaries, and for falling off in receipts in Law and Justice. The figures of 1883-84 include extraordinary marine charges.

Productive

Productive Railways—Railways have latterly been increasing at an average rate of 300,0 a year, so that if our normal figure for 1883-84 be 2,839,8, we should have seen 2,239,8 in 1881-82, and 2,539,8 in 1882-83. The figures of 1881-82 (2,630,0) were better than this, as there was a large and sudden expansion of traffic. The figures of 1882-83 (2,132,8) were worse, namely, through a falling off in East Indian Railway coinciding with a year of special expenditure. The full amount, 2,839,8, was more than realised in 1883-84, but a special write-off reduced it by 325,0.

Other Public Works—The Provincial expenditure during the last year or two has been excessive, and Imperial expenditure has also been higher than usual. In 1883-84, 533,0, cost of Madras harbour works, was written off.

Army—The year 1881-82 included a large receipt by English contribution on account of Afghan war, which more than covered the war expenditure of the year. The year 1882-83 included charges for the expedition to Egypt, and 1883-84 includes repayment of a million sterling to the War Office.

Exchange—We have in late years remitted more than was required to meet current expenditure.

May 1884.

J. W.

STATEMENT No. 1.—Hundreds of £ —/00 omitted.

	REVISED ESTIMATES FOR 1883-84				ITEMS TRANSFERRED				ESTIMATES RE-ARRANGED.					
	Receipts.		Expenditure		Receipts		Expenditures.		Receipts		Expenditure			
	India	England.	India.	England.	India	England	India.	England.	India.	England	India.	England	India.	England.
A.														
Not connected with Famines or Railways.														
Interest - - - - -	-	-	1,801,7	2,448,0	-	-	+2,358,1	+311,4	-	-	4,159,8	2,759,4	-4,159,8	-2,759,4
Revenue - - - - -	51,378,7	2,4	8,441,7	38,0	+542,8	-	-	-	51,921,5	2,4	8,441,7	38,0	+43,479,8	-35,6
Post Office, &c. - - - - -	1,671,7	51,4	1,798,1	283,3	-	-	-	-	1,571,7	51,4	1,737,1	283,3	-165,4	-231,9
Civil Departments - - - - -	1,433,8	3,1	10,793,3	511,7	-	-	-	-	1,433,8	3,2	10,796,3	511,7	-9,361,5	-508,5
Miscellaneous - - - - -	1,267,7	146,6	2,081,9	1,878,3	-	-	-	-	1,267,7	146,6	2,081,9	1,878,3	-814,2	-1,731,7
Productive Public Works (excluding Railways)	1,487,3	-	2,877,1	311,4	-	-	-542,8	-2,358,1	-	-	-	-	-	-
Other Public Works (excluding Railways) -	6,317	16,9	6,785,0	96,3	-944,5	-	-519,0	-	-	-	-	-	-	-
Army - - - - -	860,9	57,5	12,061,0	5,065,6	+944,5	-	+519,0	-	1,576,2	16,9	7,304,0	96,3	-5,727,8	-79,4
Exchange - - - - -	-	-	3,860,0	-	-	-	-	-	860,9	57,5	12,061,0	5,065,6	-11,200,1	-5,008,1
	-	-	-	-	-	-	-	-	-	-	3,860,0	-	-	-
TOTAL of Part A.	58,631,8	278,0	50,440,8	10,632,6	-	-	-	-	58,631,8	278,0	50,440,8	10,632,6	8,191,0	10,364,6
B														
Connected with Famines or Railways.														
Famine - - - - -	-	-	1,499,8	2										
Productive Railways														
State - - - - -	3,087,3	-	1,691,0	-										
East Indian - - - - -	5,030,0	2	2,045,5	-										
Guaranteed - - - - -	3,365,0	-	641,5	-										
Annuities - - - - -	-	-	-	1,203,3										
Guaranteed Railways and Interest	-	-	5,7	3,284,2										
TOTAL	11,482,3	2	4,383,7	4,487,5										
Non-Productive Railways														
State Capital - - - - -	-	-	-374,6	-										
State Working - - - - -	174,9	-	170,9	-										
Subsidised - - - - -	-	27	158,5	27,8										
Frontage - - - - -	-	-	-22,5	-										
TOTAL	174,9	27	-67,7	27,8										
TOTAL of Part B	11,657,2	29	5,815,8	4,515,5										

STATEMENT No. 2.—Hundreds of £—00 being omitted.

	Normal Figures.				Revised Estimate, 1893-94.				Normal Figures, better or worse.		For Explanation, see Para.	
	Receipts.		Expenditure.		Receipts.		Expenditure.		India.	England.	India.	England.
	India.	England.	India.	England.	India.	England.	India.	England.				
Interest on Debt, including Productive	-	-	2,728.0	2,788.1	-	-	2,722.5	2,754.3	-70.5	+6.2	3	3
Interest on other obligations	-	-	470.0	2.2	-	-	457.0	5.1	-44.0	+2.9	117	121
TOTAL Interest	-	-	4,208.0	2,800.3	-	-	4,180.5	2,760.4	-108.5	+9.1		
Land Revenue	22,234.0	-	2,500.0	22,413.5	2,342.2	-	-	-	-26.5	-37.3	22	22
Opium	8,610.0	-	2,300.0	8,682.2	1,822.2	-	-	-	-873.2	-477.8	51	51
Salt	6,270.0	-	420.0	6,267.2	474.8	-	-	-	+2.2	+2.2	28	28
Stamps	2,490.0	-	22.0	2,492.2	22.0	-	-	-	+14.8	+14.8	67	67
Excise	2,775.0	-	94.0	2,774.8	22.0	-	-	-	-5.4	-5.4	28	28
Provincial Rates	2,710.0	2.4	94.0	2,724.9	22.0	2.4	22.0	22.0	+1.0	+1.0	69	69
Customs	1,244.0	-	88.5	1,246.0	22.0	-	-	-	-1.2	-1.2	45	45
Assessed Taxes	225.0	-	128.0	216.9	128.2	-	-	-	-24.9	-24.9	48	48
Forest (Net Revenue)	222.0	-	17.0	216.9	12.5	-	-	-	+6.1	+6.1	45	45
Registration (Net Revenue)	21.2	-	-	21.2	-	-	-	-	+2	+2	60	60
Tributes	702.0	-	-	712.2	-	-	-	-	-2.4	-2.4	61	61
Refunds	-	-	189.0	-	274.4	-	-	-	-2.1	-2.1	50	50
Assignments	-	-	1,209.0	-	1,205.2	-	-	-	+185.4	+185.4	55	55
TOTAL Revenue	60,068.3	2.4	7,722.5	61,070.3	7,800.5	2.4	38.0	-1,194.0	-5.4			
Post Office (Net)	-	-	110.0	101.2	-	-	108.6	108.6	-1.4	+4.8	72	121
Telegraph (Net)	-	-	20.0	11.5	-	-	65.2	121.2	+5.6	+5.6	77	121
Mint (Net)	8.0	-	-	8.5	8.7	-	-	6.1	-7	-9	77	
TOTAL	8.0	-	130.0	121.2	8.7	-	174.1	334.0	-18.6	+9.4		
General Administration	-	-	1,200.0	241.0	-	-	1,344.6	241.7	+24.6	+7	81	81
Law and Justice (Net)	-	-	2,700.0	-	-	-	2,672.4	-	-27.6	-	83	83
Police (Net)	-	-	2,450.0	-	-	-	2,449.8	-	-0.2	-	88	88
Marine (Net)	-	-	170.0	180.0	-	-	234.8	211.2	+64.8	+61.3	87	119
Education (Net)	-	-	960.0	-	3.2	-	961.5	-	+1.5	-	89	89
Ecclesiastical	-	-	261.0	22.5	-	-	189.9	22.9	-1.1	+4	10	21
Medical (Net)	-	-	627.0	26.1	-	-	627.1	26.9	+0.1	+0.8	93	93
Political	-	-	246.2	-	-	-	246.9	-	+0.7	-	92	92
Scientific, &c. (Net)	-	-	249.0	-	-	-	246.1	-	-2.9	-	94	94
TOTAL	-	-	9,335.2	496.6	3.2	-	9,361.5	511.7	+26.3	6.1		
Interest	660.0	29.0	-	-	761.8	29.0	-	-	-101.8	0	26	26
Political Pensions	-	-	655.0	81.3	-	-	655.7	79.9	+7	+48.5	104	104
Furlough Allowances	-	-	6.0	215.3	-	-	7	217.0	-4.3	+1.5	-	119
Superannuation	-	-	-	-	900.1	99.6	-	-	+1.2	0	108	123
Expenditure	401.3	26.6	723.7	1,425.0	-	-	747.2	1,426.0	-46.5	0	106	106
Stationery	-	-	228.7	124.8	-	-	228.7	123.0	0	-11.9	109	109
Miscellaneous	-	-	18.0	26.4	-	-	22.5	23.5	+3.2	-1.0	110	110
TOTAL	261.3	146.6	1,722.4	2,841.7	281.9	146.6	1,774.1	1,678.2	-116.9	+36.6		
Public Works, excluding Railways	-	-	-	-	-	-	-	-	-	-	-	-
Military Works	26.7	-	1,000.0	-	26.7	-	1,000.7	6.8	+90.7	+6.8	127	127
Civil Buildings, &c.	-	-	-	-	-	-	-	-	-	-	-	-
Receipts	452.0	15.0	-	48.4	16.9	-	1,160.1	88.8	+12.6	-1.9	129	129
Imperial Expenditure	-	-	460.0	90.0	-	-	460.0	-	-460.0	-1.2	131	131
Provincial Expenditure	-	-	2,460.0	-	-	-	2,460.0	-	+2,460.0	-	130	130
Irrigation	-	-	-	-	-	-	-	-	-	-	-	-
Receipts	1,060.0	-	-	1,067.1	-	-	1,314.3	1.7	-71	-	140	140
Expenditure	-	-	1,280.0	-	-	-	-	-	-46.7	+1.1	140	140
TOTAL	1,481.7	15.0	6,270.0	80.0	1,574.2	16.9	7,204.0	94.3	+1,083	+4.4		
Army (Net)	-	-	11,000.0	4,000.0	-	-	11,157.1	5,002.2	-142.9	+1,002.3	6 to 8	8
Army Receipt (Net)	-	-	-	-	-	-	43.0	4.2	+43.0	+9.2	-	-

STATEMENT No. 3 — RATE of Annual Improvement

	Revenue.	Expenditure		Revenue.	Expenditure
Land Revenue	80.0	—20.0	Administration	-	-8.0
Salt	150.0	—20.0	Law and Justice	-	-20.0
Stamps	40.0	-	Police	-	-20.0
Excise	120.0	-	Marine	-	-8.0
Customs	40.0	-	Education	-	-30.0
Other Revenue	-	-30.0	Medical	-	-10.0
NET	360.0	-70.0	TOTAL	-	-96.0

FINANCIAL RESULTS OF THE PROPOSALS OF THE GOVERNMENT OF INDIA.

HAVING ascertained what may be taken as the present financial position of the Government, I now proceed to consider how it will be affected by the present proposals for railway construction

2 The total amount of capital expenditure for which Government proposes to accept financial responsibility by the operations of the next five years is shown in the following abstract, in addition to which, we must remember that it is already responsible for three millions sterling of capital in respect of the Southern Mahratta Railway. The figures, however, do not include capital expenditure upon the existing guaranteed railways, which is estimated for the next five years at 1,500,000. I am justified in omitting this, as I have on the revenue side made no allowance for increase of receipts from the guaranteed railways.—

FOR NEW LINES.

	Spent till 31st March 1884	Further Required.	Hundreds of Pounds.	
Capital to be raised by Government :				
Imperial				
Vizagapatam-Raipur - - - -	- - - -	2,800,0		
Bellary-Kistna, and Extension - - -	154,6	2,320,4		
Jhansi-Manickpur - - - - -	- - - -	1,548,4		
Rewari Ferozpur - - - - -	- - - -	482,6		
Other lines - - - - -	105,0	3,927,4		
			1,846,0	11,174,8
Provincial				
Assam-Bihar - - - - -	205,9	2,181,1		
Sittang Valley - - - - -	974,5	195,5		
Other lines - - - - -	852,4	522,8		
			2,032,8	2,892,2
TOTAL future Capital Expenditure by Government direct - -				14,074,0
To be met from Provincial Surpluses				
Balance of Farukhabad-Hathras, Diamond-Harbour, and Parbattipur - -				48,5
By Construction and Working Companies				
Western Deccan - - - - -			1,800,0	
Bankapur-Haribar - - - - -			300,0	
				2,100,0
Limited Guarantees				
Jhansi Cross lines - - - - -			3,500,0	
Nagpur-Baraker - - - - -			5,800,0	
Bilaspur-Etawah - - - - -			3,450,0	
Bhugwangoia - - - - -			790,0	
				12,040,0
Total New Capital Expenditure proposed - - - -				28,962,5
<i>Add.</i> —For stores, &c. - - - - -				700,0
Total required for new Lines - - - -				28,962,5
<i>Add.</i> —For outlay on State Railways now open - - - -				1,500,0
Ditto - East Indian Railway - - - -				1,500,0
TOTAL - - - - -				31,962,5

Say 32 millions of pounds.

3 Now this figure, it must be remembered, is "conventional" sterling, that is, it means the Indian expenditure at 1*l* for each 10 rupees, and the English at 1*l* for each sterling pound. Judging from statistics of past expenditure, about one quarter of the whole will be spent in England, but, to allow a margin, I shall take the English part at 30 per cent, which will give for the whole five years —

In England, 9,600,000*l* sterling

In India, 22,400,000 sums of 10 rupees, equal, at 19½*d* exchange, to 18,200,000*l* sterling

The expenditure of each year is, therefore, 1,920,000*l* sterling in England, and 4,480,000 conventional pounds, or 3,640,000*l* sterling, in India.

4. The proportion as between Government and Companies is, out of 32,000,000*l*, 14,100,000*l* Companies, and 17,900,000*l* Government, so that the annual expenditure may thus be stated, in sterling —

	India.		England.	Total
	Rupees	Sterling	Sterling	Sterling
Government - - -	2,50,00,000	2,080,000	1,070,000	3,100,000
Companies - - -	1,98,00,000	1,610,000	850,000	2,460,000
TOTAL - - -	4,48,00,000	3,640,000	1,920,000	5,860,000

5 Before stating the Government proposals as to providing this money, I must observe that there has never been a distinct definition of the present borrowing limit of 2½ millions, that is to say, whether it means 2½ millions sterling, or 2½ crores of rupees, which amount to only 2,031,200*l* sterling. In their present letter, the Government of India set the amount (or rather the Railway portion of it, which is 1,800,000*l*., the remaining 700,000*l* being appropriated to irrigation) against expenditure which is stated in conventional sterling. We have shown that the expenditure stated at 1,000,000*l* in the letter really means —

	£.
Expenditure in India, 70,00,000 rupees = - - -	568,750
Ditto - England - - - - -	300,000
TOTAL, Sterling - - - £	868,750

So that, practically, the interpretation placed by the Government of India upon the present limit of 2½ millions is that it will provide 2½ times sterling 868,750*l*, or 2,172,000*l*

6 Assuming this interpretation, the Government proposals are to meet the annual demand of 3,100,000*l* sterling, as follows —

By Borrowing — Total in five years, 13,644,000*l* conventional sterling, which, by the above interpretation, involves borrowing to an extent equivalent to 11,854,000*l* actual sterling. Total for one year, 2,371,000*l* sterling.

Add the annual borrowing of 300,000*l* (conventional) for the East India Railway, equal true sterling 261,000*l*.

Total borrowing each year, sterling - - - -	£.	2,631,000
To this the Government add,—	£.	
Available from Famine Insurance Fund -	300,000	
From Provincial balances, that is, surplus revenues - - - - -	110,000	
By a recovery by sale of the Nagpur-Chattisgarh line, 630,000 <i>l</i> , or each year	126,000	
TOTAL - - - £	536,000	
If we take this as "conventional sterling," it is intended to provide for actual sterling expenditure of 536,000 × 868,750, or - - - - -		466,000
Giving against the total of 3,100,000 <i>l</i> re-quired by Government - - - - -	£	3,038,000

7 When the figures are thus stated, separating sterling from rupees, we see that they involve an assumption which will not suit, namely, the amount available from the Famine Insurance Fund is rupees, and not conventional sterling, and the 30 lacs of

rupees which it will give us will not provide "conventional sterling" expenditure to the extent of 300,000*l*. The matter, however, is not of any consequence, as it merely necessitates a small enhancement of the balance which has to come out of surplus revenues

8 I have to note also that, for the purpose of estimating the means of providing funds, upon the basis laid down in this Paper, I must omit the amount coming in by sale of the Nagpur-Chattisgarh line, because I have reckoned among the available resources the income from that line, which of course will cease on the purchase. But obviously, for this reason, the amount should be deducted from the amount to be raised and spent by companies. I have not, however, made this deduction.

9. The amount of capital annually raised for which Government is to be responsible is therefore (in addition to 466,000*l* sterling to be spent out of current revenues),—

To be raised by Government, sterling	- -	£ 2,632,000
Ditto - - Companies, sterling	- -	2,460,000
TOTAL, Sterling - - - £.		5,092,000

10 The existing authorised annual loan is as follows, on the assumption that it is to meet 2½ millions conventional sterling expenditure, of which 30 per cent. is real sterling:—

	Conventional Sterling.	Real Sterling
	£	£.
State Railways - - - - -	1,800,000	1,568,700
Irrigation - - - - -	700,000	608,200
East Indian Railway - - - - -	800,000	261,000
TOTAL Railways - - - £		1,824,700
„ Irrigation - - - £		608,200

The proposal to increase the former to 2,632,000*l*. involves additional borrowing of 807,300*l*. a year.

The Government letter stated the addition as follows:—

In their first letter, of 23rd January 1883 - - -	£ 350,000
Added in the second letter, of 29th January 1884, where the total was raised from 10,720,000 <i>l</i> to 13,444,000 <i>l</i> , s s, annually for five years - - - - -	515,000
TOTAL - - - £	865,000

Now 895,000*l* conventional sterling is nearly the same as 807,300*l* true sterling, according to the reckoning, at the ratio of a million for every 868,750*l* true sterling

11 I shall take the annual burden of this proposed borrowing at 2 per cent. for the first year, and 4 per cent afterwards. It can almost certainly be raised at 3½ per cent, or even less, but by taking the burden at 4 per cent. I provide for a considerable fall in exchange. The amount may be partly raised in rupee loans, but the estimate of 4 per cent. will also cover the burden in this case

12 I shall also assume that the burden on Government, in respect of capital raised by companies will not be less than that in respect of loans raised by itself

13 The burden of each year's borrowing (5,092,000*l*) will therefore be, in sterling —

First year, 101,840*l*.
Second and subsequent years, 203,680*l*.

or in rupees,—

First year, 12,53,000 rupees.
Second and subsequent, 25,07,000 rupees.

14. The

14 The burden of the whole borrowing for railways is, therefore, in thousands of rupees —

No of Year	First Year's Borrowing	Second Year's Borrowing	Third Year's Borrowing	Fourth Year's Borrowing	Fifth Year's Borrowing	TOTAL
1 - - -	1,253	- - -	- - -	- - -	- - -	1,253
2 - - -	2,507	1,253	- - -	- - -	- - -	3,760
3 - - -	2,507	2,507	1,253	- - -	- - -	6,267
4 - - -	2,507	2,507	2,507	1,253	- - -	8,774
5 - - -	2,507	2,507	2,507	2,507	1,253	11,281
6 - - -	2,507	2,507	2,507	2,507	2,507	12,535
7 and after -	2,507	2,507	2,507	2,507	2,507	12,535

The burden of new borrowing for irrigation may be assumed to be met from increased irrigation receipts, not included in our figures.

15 But, on the other hand, the expenditure of this amount on railways will not be absolutely without return, in fact, more than half of it is estimated by the Government of India to be "Productive," that is, to reach a return of 4 per cent. within five years of the opening of the lines. It is therefore a moderate estimate to take the following as the scale of return upon each year's outlay :—

- First year, works under construction, no return.
- Second year - - ditto - - ditto.
- Third year - - ditto - - ditto
- Fourth year, 1/2 per cent
- Fifth year, 1 " "
- Sixth year, 1 1/2 " "
- Seventh year, 2 " "
- Eighth year, 2 1/2 " "
- Ninth year, 2 1/2 " "
- Tenth year, 3 " "

But the whole annual expenditure being,—

In India - - - - -	<i>Rs</i>	4,48,00,000
In England, sterling 1,920,000 L, equal to -		2,36,30,000
TOTAL - - - - -	<i>Rs.</i>	6,84,30,000

a return of 1/2 per cent. means a revenue of 3,42,000 rupees

16 The following Table therefore gives the return on each of the five years of expenditure, in thousands of rupees —

No of Year	Return obtained from each Year's Expenditure.					TOTAL Return.
	First	Second	Third	Fourth	Fifth	
1 - - -	—	—	—	—	—	—
2 - - -	—	—	—	—	—	—
3 - - -	—	—	—	—	—	—
4 - - -	342	—	—	—	—	342
5 - - -	684	342	—	—	—	1,026
6 - - -	1,026	684	342	—	—	2,052
7 - - -	1,368	1,026	684	342	—	3,420
8 - - -	1,710	1,368	1,026	684	342	5,130
9 - - -	1,710	1,710	1,368	1,026	684	6,498
10 - - -	2,052	1,710	1,710	1,368	1,026	7,866
11 - - -	2,052	2,052	1,710	1,710	1,368	8,892
12 - - -	2,052	2,052	2,052	1,710	1,710	9,576
13 - - -	—	—	—	2,052	1,710	—
14 - - -	—	—	—	—	2,052	—
15 - - -	—	—	—	—	—	—
16 - - -	—	—	—	—	—	—

17 Before combining the figures into a final account, I must go back to the operations of the (original) Southern Mahratta Railway, for the burden of which I have as yet made no provision

The burden of this Company's demands (excluding the Western Deccan Railway, which is dealt with in the body of the calculations) is for the present 4 per cent. on sterling 3,000,000 l, less any profits upon working. The interest charge is therefore (at 19 1/2 exchange) 14,80,000 rupees

18 As regards the returns, we may take it that one million will begin returning this year, one million next, and one million next, and that they will return at the rate above calculated, namely—

YEARS	First Million, £ Sterling	Second Million	Third Million	TOTAL.	Or in Thousands of Rupees.	
					Total Return	Net Charge
1	5,000	-	-	5,000	61	1,419
2	10,000	5,000	-	15,000	185	1,295
3	15,000	10,000	5,000	30,000	369	1,111
4	20,000	15,000	10,000	45,000	554	926
5	25,000	20,000	15,000	60,000	738	742
6	25,000	25,000	20,000	70,000	862	618
7	30,000	25,000	25,000	80,000	985	495
8	30,000	30,000	25,000	85,000	1,046	434
9	30,000	30,000	30,000	90,000	1,108	372
10	-	-	-	95,000	1,169	311

19 I now put the figures together for the purpose of a forecast of the next few years' accounts. The existing surplus on the account, after the provision of 75,00,000 rupees for reduction of debt, 25,00,000 rupees for protective irrigation, and 50,00,000 rupees for protective railways, is 47,97,000 rupees. The first two of these are still reserved for reduction of debt and irrigation respectively, the last is utilised towards the new proposals. We take the improvement of net revenue at 25,00,000 rupees, an amount which provides for about three-sixteenths fall of exchange every year. (See para. 33 (6) of Paper on Financial Position, &c.) We shall assume this amount of surplus as safe for five years.

20 It may be noted that the Government railway construction, 3,100,000 £ sterling, is distributed as follows—

	INDIA		ENGLAND	Total Sterling
	Rupees.	Equal Sterling.	Sterling	
From Loan Funds	1,92,24,000	1,562,000	1,070,000	2,632,000
From Famine Insurance Fund	30,00,000	244,000	-	244,000
From Surplus Revenue,—The balance	27,76,000	224,000	-	224,000
TOTAL	2,50,00,000	2,030,000	1,070,000	3,100,000

21. Forecast for 10 years, in thousands of rupees, or hundreds of conventional pounds.—

	YEAR AND NUMBER OF YEAR.									
	1884-85.	1885-86.	1886-87.	1887-88.	1888-89.	1889-90.	1890-91.	1891-92.	1892-93.	1893-94.
	L.	£.	£.	£.	£.	£.	£.	£.	£.	£.
Available Funds										
Present Surplus of Revenue (1883-84)	479.7	479.7	479.7	479.7	479.7	479.7	479.7	479.7	479.7	479.7
Increase of Surplus	360.0	800.0	780.0	1,000.0	1,250.0	1,260.0	1,250.0	1,250.0	1,250.0	1,250.0
Famine Grant, Railway portion	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0
TOTAL Available Funds	1,339.7	1,479.7	1,760.7	1,979.7	2,229.7	2,239.7	2,239.7	2,239.7	2,239.7	2,239.7
Proposed Disposal of Funds										
Expenditure on Railways out of the Famine Grant.	300.0	300.0	300.0	300.0	300.0	-	-	-	-	-
Burden of proposed Borrowing by Government and by Companies.	126.3	376.0	626.7	877.4	1,137.1	1,263.5	1,263.5	1,263.5	1,263.5	1,263.5
Net Burden of Southern Mahatras Railway	141.9	199.5	111.1	92.8	74.3	61.8	49.5	48.4	37.3	31.1
Expenditure on Railways out of Surplus Revenue.	377.8	377.8	377.8	377.8	377.8	-	-	-	-	-
Total Charge	846.8	1,063.3	1,315.6	1,547.6	1,779.9	1,816.8	1,803.0	1,796.9	1,790.7	1,784.6
Deduct,—Probable Net Earnings	-	-	-	84.3	102.6	305.2	342.0	613.0	649.5	788.6
Net Charge	846.8	1,063.3	1,315.6	1,613.4	1,677.3	1,511.6	1,461.0	1,183.9	1,141.2	996.0
Final Surplus on the year's account after reservation of 750 £ for Reduction of Debt, and 250 £ for Protective Irrigation Works.	492.9	416.4	445.1	366.3	452.4	728.1	778.7	1,055.8	1,098.5	1,243.7

22. In this statement of results I have headed the first year 1884-85, because such are the proposals of the Government of India; but it is evident that the proposals must now be set back by a certain time, half a year or a year, and the result of this will be to improve the financial position slightly, by postponing the burden, while in other respects the

the position improves, but in any case, the result is such as to show that a very considerable margin exists to give us assurance that we are well within our financial means after we undertake the whole of the proposed railway construction. I have carried the figures beyond the first five years, far enough to show that the operations of the five years are not likely to throw a burden upon future years; but results so remote must necessarily, in many respects, be taken with reservation. I have, however, as I think, made, on every point which is open to question, assumptions which are considerably on the side of unfavourableness to Government. Famine is taken as sufficiently provided for by the Famine Insurance Fund, notwithstanding the hypothecation of two fifteenths of its amount, and war is a calamity which must be left outside the present discussion.

May 1884

J W

Appendix, No. 10.

PAPERS handed in by Mr. Westland, and referred to in his Evidence, 23 May 1884, Q. 5121

RECENT AND PROPOSED CAPITAL OUTLAY ON RAILWAY CONSTRUCTION
(Conventional Sterling, Thousands of Pounds)

(1)—By the Government of India

Year	Productive.	Not Productive.	Frontier.	Protective	East India Railway	TOTAL.
	£	£.	£	£	£	£.
1880-1	2,554,000	77,000	2,294,000	-	419,000	5,344,000
1881-2	1,635,000	848,000	225,000	615,000	455,000	3,178,000
1882-3	1,647,000	468,000	250,000	-129,000	148,000	2,393,000
1883-4	3,070,000	-375,000	-22,000	698,000	238,000	3,587,000
TOTAL - £.	8,506,000	418,000	2,756,000	1,112,000	1,260,000	14,452,000
Average - £.	2,226,000	104,000	689,000	278,000	315,000	3,613,000

Total of three years, 9,108,000
Average - - - 3,036,000

Present Proposals

INDIA	£ 2,500,000
ENGLAND	1,070,000
TOTAL ANNUAL OUTLAY	£ 3,570,000

(2)—By Companies, exclusive of Guaranteed Companies.

1882-3 and 1883-4	Southern Mahratta	about	1,300,000 sterling
	Bengal Central	"	600,000 "
	Bengal and North West	"	600,000 "
	TOTAL	£.	2,500,000 "
	Average	£.	1,250,000 "

PRESENT PROPOSALS - - - £ 2,460,000 sterling annually

TWELVE YEARS ACCOUNTS, 1871-2 TO 1882-3
(in even Thousands)

		Receipts.	Disbursements
	£.	£	£
ORDINARY REVENUE.			
Surplus of Revenue over Expenditure, including Provincial			
By Ordinary Account, including Provincial - - - -	1,544,000		
Add, certain Expenditure included in Ordinary Account, but afterwards transferred to Productive ^a - - - -	6,296,000		
TOTAL - - - - £		7,840,000	
PRODUCTIVE PUBLIC WORKS			
Originally taken as Capital Expenditure - - - -	42,940,000		
Transferred from Ordinary Account, as above - - - -	6,296,000		
Purchase of East India Railway - - - - -	10,643,000		
TOTAL Debt raised and Capital spent - - - - £		59,879,000	59,879,000
ORDINARY DEBT			
Net discharge of Ordinary Debt - - - - -			8,693,000
	Received.	Disbursed	
	£	£.	
OTHER OBLIGATIONS			
Savings Bank Deposits - - - - -	2,593,000		
Loans to Municipalities - - - - -		4,214,000	
Withdrawals on Capital Account of Guaranteed Railways - - - - -		1,546,000	
Other Bill Remittance and Deposit Accounts - - - - -	2,176,000		
	4,769,000	5,789,000	
			1,020,000
CASH BALANCE.			
Cash Balance, Decrease of - - - - -		1,873,000	
	£	69,592,000	69,592,000

DEBT	1 April 1871.	31 March 1883	Increase or Decrease
	£	£	£
Ordinary - - - - -	99,729,000 + 4,579,000† = 104,308,000	84,863,000	- 9,445,000 ‡
Productive - - - - -	4,807,000	64,411,000	+ 59,604,000 §
TOTAL - - - - £	104,336,000	159,274,000	50,359,000

The DEBT above stated was as follows

	1 April 1871	31 March 1883	Increase
	£	£	£
ENGLAND - - - - -	67,628,000 + 4,679,000	68,686,000	26,379,000
INDIA - - - - -	66,709,000	90,689,000	22,980,000
	104,336,000	159,274,000	50,359,000

The "ORDINARY EXPENDITURE" includes

	£
State Railway Capital - - - - -	1,801,000
Frontier Railways - - - - -	4,112,000
Famine Relief - - - - -	14,710,000
War Expenditure, Afghanistan - - - - -	11,840,000
" Egypt - - - - -	699,000
Commissioners for Reduction of Debt - - - - -	2,059,000
Protective Railways and Irrigation - - - - -	884,000
TOTAL of these - - - - £	36,105,000

^a This was mostly, but not entirely, incurred in the 12 years included in the statement.

† This is the value of Dividend on Capital Stock of the East India Company, converted into debt in 1873-4 and 1874-5, by operations under Act 26 Vict. c. 17

‡ Discharged, as above - - - - - 8,098,000
By Commissioners for Reduction of Debt - - - - - 752,000

£ 9,445,000

§ £ 59,879,000 less 75,000 † discharged by Sinking Fund of East India Railway

Appendix, No. 11.

PAPER handed in by Mr. Samuelson.

INDIAN RAILWAY CONSTRUCTION.

STATEMENT of *J. Lowthian Bell*, F.R.S., Chairman of the British Iron Trade Association.

1 THE present time is exceptionally favourable for the construction of new railways in India, so far as regards the cost of permanent way, materials, &c.

2 The average price of steel rails purchased for the Indian railways before 1872 was about 10*l* per ton

3. The average price of steel rails purchased for the Indian railways between 1877 and 1883 was about 5*l*. 14*s* per ton at the maker's works,

4 The lowest price at which any considerable quantities of steel rails have ever been sold was about 4*l* 5*s*. per ton.

5 The present price of steel rails is 4*l*. 17*s* 6*d* per ton for heavy sections, it is barely remunerative to the maker, and is not likely to fall.

6 The experience of former years shows that the price of rails is subject to sudden fluctuations, frequently from a relatively small increase in the demand. It is probable that unless advantage be taken of the present depression to make contracts a considerably higher price may have to be paid for rails

7. In the prices of wrought-iron girders for bridges, &c, there has been a considerable fall within the last few years, and prices are now lower than at any previous period. The following figures, from an authoritative source, as the prices at which bridge work for India has actually been undertaken, will enable a comparison of different dates to be made.

YEAR.	Price per Ton, f.o. 6, London.
1876	£ 14 10 <i>d</i>
1879	12 17 6
1881	12 2 6
1884	11 - -

8 The following prices are those at which contracts have actually been made for case-iron sleepers on Indian account by leading firms in this country.

YEAR.	Price per Ton, f.o. 6, Ship.
1878	£ 4 3 6
1881	3 15 -
1882	3 9 6
1884	2 19 6

9 The price of sleepers is extremely low, and what has been said about the probability of a rise in the price of rails applies also to sleepers.

10 All other iron and steel railway materials is proportionately cheap at the present time.

11 The cost of permanent way and rolling stock forms a very large proportion of the total outlay involved in railway construction in India. The official report on "Railways in India for 1882-3," shows that the total expenditure incurred in the various State railways to that date was 3,891 lacs of rupees, of which total 1,077 lacs were expended in the permanent way.

12 Although they may be somewhat beyond the province of the British Iron Trade Association, the special experience of the members of that association may justify the following observations

(a) There is in India a great field for the development of coal mining in connection with the extension of railways. Just as mills for spinning and weaving cotton and jute by mechanical power are taking the place in India of hand-spinning and hand looms, and of imported fabrics, so cheap coal will lead to the establishment of mechanical industries in place of the imported articles, and of those manufactured in iron and steel, in brass and pottery by more than a million of native artificers.

(b) The returns from railways already constructed in India should encourage further railway enterprise in that country. The cost of those railways recently constructed in India is lower than that of those of the United Kingdom, France, Germany, Belgium, Austro-Hungary, Italy, or Switzerland; and the net returns including those on the expensive railways of the earlier period, have been higher than in any of those countries.

Appendix, No. 12.

PAPERS handed in by Mr. *Rendel*, 10 June 1884.

— 1. —

EXTRACT from "The Railroad Gazette," 27 July 1883.

THE CHEAPEST RAILROAD WORKING IN THE WORLD.

THE East Indian Railway, the greatest railroad of British India, compares more nearly with our chief lines in its average freight rates than any European road, and at the same time has lower average passenger fares than European roads, which have generally, out of England, much lower fares than ours, taking all classes together. The East Indian has 1,506½ miles of road, 46¼ of which have a double track. Its passenger traffic in 1882 amounted to no less than 882,445,835 passenger-miles, which is equal to 803¼ passengers each way daily over its entire mileage, against 592 on the New York Central, which, with one-third less mileage, had little more than half the passenger traffic of the East Indian, and there is no other railroad system in the United States that has so heavy a passenger traffic as the New York Central. But the dense population which furnishes this heavy travel in India is mostly very poor, and must have rates to suit their circumstances, and, in fact, the average passenger rates are, so far as we know, the lowest in the world, being in 1882 only 0.64 cent. per mile, which would be at the rate of 57½ cents for a ticket from New York to Philadelphia, 92 cents from New York to Albany, \$ 6.14 from New York to Chicago, 21 dollars from New York to San Francisco, and \$ 11.95 from Omaha to San Francisco, rates which would not pay a fraction of the expenses in this country, where there are but about 475 inhabitants per mile of railroad, against more than 20,000 in India. To give the average mile of railroad as much travel as the Indian roads get, the average American must travel as much as 42 average Hindoos. This very low average rate is almost wholly due to the predominance of the lowest class of passengers in India. No less than 92 per cent. of its passengers rode in what is called the third class, which is really a fourth class, as between it and the second class is an "intermediate class," to which 5.8 per cent. of its passengers belonged, leaving but 2.2 per cent. in the first and second classes, and less than half per cent. in the first class. Out of an average of 24,068 passengers that use its cars daily, only 116 ride in the first-class cars, and the amount received from carrying first and second-class passengers, therefore, had but little effect on the average rate. The regular third-class rate (which was reduced one-fifth during 1882) is 0.573 cent. per mile; for a part of the year it was 0.7874. As the average rate for all classes was but 0.64 cent. for the year, we can judge how little effect the other classes had on it.

The East Indian freight traffic does not make so imposing a showing, by any means, but it is very large, nevertheless, amounting to 1,125,171,840 ton-miles, which is less than half the New York Central's freight traffic on two-thirds of the mileage, and equivalent to 1,017¼ tons carried each way daily over the entire mileage, against 3,280 on the New York Central. The number of American roads whose freight traffic exceeds that of the East Indian is not very great, however.

The average rate per ton per mile on the East Indian would be called high on our trunk lines or their immediate connections, but is equalled on many of the roads from Chicago westward, and exceeded by many others, including nearly all Southern and most New England roads. It was 1.261 cents, which is exactly the same as the average on the Chicago and Alton last year. Compare it with the following American rates in 1882: Canada Southern, 0.552 cent., Philadelphia and Erie, 0.615, New York, Pennsylvania and Ohio, 0.622, Lake Shore, 0.628, Columbus, Chicago and Indiana Central, 0.660, Pittsburgh, Cincinnati and St. Louis, 0.700, Cleveland, Columbus, Cincinnati, and Indianapolis, 0.706, New York Central 0.738, Erie, 0.749; Michigan Central, 0.772; Pennsylvania, 0.817, Wabash, 0.951, Rock Island, 1.170; Illinois Central, 1.420, Milwaukee and St. Paul, 1.480 cents.

If the New York Central had obtained the East Indian freight rate last year, its freight earnings would have been 30,197,000 dollars, instead of 17,672,000 dollars, and the difference (all net) would have been equal to a dividend of 14 per cent; but with the East Indian passenger rate its profits on passengers would have been reduced just about 5,000,000 dollars, and with the East Indian rates on both branches of traffic its profits would have been larger than they were by 7,525,000 dollars, and would have amounted

to \$14.82 instead of \$6.42 per share of stock. The Lake Shore's earnings at the East Indian rates compare as follows with its actual earnings —

	Actual.	By East Indian Rates.
	Dollars	Dollars.
From freight - - - -	12,022,577	24,139,797
From passengers - - - -	4,897,185	1,453,510
Freight and passengers - -	16,919,762	25,593,387

That is, the Lake Shore would have made 12,000,000 dollars more from freight, and 3,440,000 dollars less from passengers if its traffic had been carried at the rates of the East Indian Railway, and on the whole it would have had 8,674,000 dollars more profit, and could have paid a dividend of 25 dollars per share instead of 8 dollars, and had something to spare.

But the East Indian Company makes a very favourable showing as to the expense per ton per mile, as well as per passenger mile. Its receipts are not mostly swallowed by the working expenses, but the latter in 1882 were only 37 per cent. (In 1881 they were only 31½ per cent.) Assuming that the proportion of expenses to receipts was the same for passengers and freight, the cost per ton per mile to the company was 0.467 cent, and per passenger per mile the incredibly small amount of 0.237 cent. If the latter is too small, we must remember that the former is too large. Per passenger-mile the cost in this country is five or six times as great, per ton-mile very few roads go below it. We cite the following (cost per ton per mile in 1882) Lake Shore, 0.413 cent., Canada Southern, 0.420, Philadelphia and Erie, 0.430, New York, Pennsylvania, and Ohio, 0.455, Pennsylvania, 0.473; Pittsburgh, Cincinnati, and St. Louis, 0.510, Cleveland, Columbus, Cincinnati, and Indianapolis, 0.513, Erie, 0.529; Michigan Central, 0.558, New York Central, 0.600. Thus only four roads can we find with a lower cost per ton per mile than the East Indian, which even goes a little below the Pennsylvania Railroad Division of the Pennsylvania Railroad Company. Taking passengers and freight together, the East Indian is probably more cheaply worked than any other railroad in the world. The profit that it makes on freight is enormously greater than is made on any of our roads with heavy traffic, amounting to 0.794 cent. per ton per mile. Many of our railroads have to put up with a third or a quarter of that. Witness the following profits per ton per mile of some leading roads last year: Columbus, Chicago, and Indiana Central, 0.05 cent.; Canada Southern 0.132, New York Central, 0.138, New York, Pennsylvania, and Ohio, 0.167; Philadelphia and Erie, 0.185, Pittsburgh, Cincinnati, and St. Louis, 0.190, Vandavia, 0.190, Cleveland, Columbus, Cincinnati, and Indianapolis, 0.193; Michigan Central, 0.214; Lake Shore, 0.215, Wabash, 0.257, Erie, 0.276, Northern Central, 0.291, Boston and Albany, 0.300. None of these have half the East Indian's profit per ton per mile, some of the smaller roads doubtless have, and perhaps a few of the larger Western roads, none of which have so dense a traffic. In a list which includes several of the latter, the Illinois Central approaches the East Indian most nearly, with a profit of 0.781 cent. per ton per mile.

The East Indian report mentions a reduction in its rate on wheat, made at the instance of the Indian Government (which owns, but does not work this road), in order to enable Indian wheat to compete with American in the European market. The reduction was not made until 1st June this year. From Delhi to Howrah, 954 miles (just about equal to the distance from Chicago to New York), it is equivalent to 32¼ cents per 100 lbs (0.672 cents per ton per mile), against our summer rate of 25 cents and winter rate of 30, a closer approximation than there is elsewhere in the world. From Delhi to Bombay, 889 miles, the rate was also reduced 18¼ per cent. to 36 cents per 100 lbs, which is about 0.83 cent. per ton per mile. With their extremely low working expenses it would seem that the Indian roads ought to be able to make rates on grain even lower than those of our roads, the more so because they do not depend to so great an extent on their export grain freights. That is, what they get from this freight is usually so much additional profit, and if it costs the East Indian even as much as the average ton of freight (and with the long haul it ought not to cost nearly as much), it still leaves it a profit of 0.205 cent. per ton per mile, which is as large a profit as some of our roads get on all their freight. If the cost of production in India is no greater than has been represented, then there is no doubt that with the cheap transportation to the sea which its railroads can well afford, no country can supply Europe so cheaply. But, as we have said, India usually needs nearly all the grain it can raise. It is densely peopled, and it is not to be supposed that much productive land has remained uncultivated in a country where the people starve every few years. It is said, however, that in the Indus Valley a large amount of land may be made available for wheat by irrigating works, which the Government is prosecuting. Last year the East Indian road carried much less grain than usual (its receipts from grain freights being 800,000 dollars less in the last half of 1882 than in 1881), not because of light crops on its own lines, but because of heavy ones in the North-west Provinces of India, which provided for themselves what the year before had been imported from other parts of India.

The low working expenses in India are probably chiefly due to the low wages paid. More and more the railroads have been substituting Native for European employes, and natives now occupy many responsible positions, even as enginemen and station-masters, and nearly all the lower places. Their pay is very small. Materials and supplies must cost more than in Europe, but probably less than in this country, with the exception of timber and ties. Not many years ago the Indian railroads imported most of their fuel, and in those days the transportation by sea around the Cape of Good Hope was costly. The East Indian report says that the 195,593 tons of steam coal which it consumed in 1882 cost it \$2 02 per ton, \$1 06, of which was for transportation (apparently over its own lines), and 191,184 tons of it came from its own collieries. This is below the average cost of fuel in this country, and very good fuel it would seem to be, as there are 46,275 train miles per ton of coal. Just how far the cheapness of work is due to large train-loads, we are unable to ascertain, as passenger and freight-train mileage are not given separately. But either the freight or the passenger train load, or both, must have been large, as there is an average of 97½ passenger miles and 124 ton-miles per train-mile. The average passenger train load on our more important roads does not often reach 65, so that there must inevitably be a large one on the East Indian. The very largest average freight-train load in this country is, we believe, 267 tons, on the Philadelphia and Erie last year, and also the year before. With this average for East Indian freight trains, its average passenger train load would have been 182 against 46 on the Pennsylvania Railroad, 69½ on the United Railroads of New Jersey; 79 on the New York Central, and 44½ on all the railroads of the United States in the census year. If the East Indian average freight train load was less than 267 tons, its average passenger train load was more than 182, and thus we imagine was the case. The passenger traffic there is more like our immigrant traffic on the trunk lines than anything else in this country, and it is entirely practicable to haul such passenger trains anywhere, and probably easy to fill them in the crowded population of India at the regular fourth class rate of 0 573 cent. per mile, and necessary, we may add, to get very large train loads to make the average fare of 0 64 cent per mile pay.

We find here that the English managers of this railroad have adopted a policy suited to a country and a population radically different from that of England, an adaptability, by the way, which the English have not always shown in other parts of the world. They have at home an enormous freight and passenger traffic, carried short distances, requiring speed, promptness, and frequent service, and they have given what was required, charging high rates for both passengers and freight. In India there was an enormous population, chiefly subsisting on incomes but a fraction as large as those of European peasants, but ready to travel at a price within their means. The vast passenger traffic of the East Indian Railway and its extremely low rate shows with what success this peculiarity has been met. The freight traffic there is probably less important, but the low wheat rate that went into effect last June shows that in India as well as in this country the railroads have learned to adapt their rates to the requirements of their traffic.

— 2. —

INDIAN RAILWAYS.

AVERAGE TRAFFIC passing over each Mile daily in 1882.

A — Broad Gauge Lines.

Length		Passenger Traffic.	Goods Traffic.
Miles		Persons.	Tons.
1,507	East Indian - - - - -	1 416	1,624
861	Madras - - - - -	657	264
1,447	Great Indian Peninsula - - - - -	700	1,031
460	Bombay and Baroda - - - - -	1,251	808
193	Eastern Bengal - - - - -	1,167	900
676	Sonde, Punjab, and Delhi - - - - -	952	561
847	Oude and Rohilkund - - - - -	751	469
410	Punjab, Northern - - - - -	615	186
653	Indus Valley - - - - -	321	513
45	Wurdha Coal - - - - -	174	271
48	Calcutta and South Eastern - - - - -	455	70
57	Patna-gva - - - - -	1,160	178
117	Nizam's - - - - -	638	201
TOTAL - 7,024			
Average over whole of Broad Gauge - - - - -		862	870
Add, 12½ per cent. to Passengers, for other Coaching Traffic - - - - -		110	—
TOTAL Average Daily Traffic per Mile on Broad Gauge - - - - -		993 Passengers.	870 Tons of Goods.

- B.—Narrow Gauge.

Length.		Passenger Traffic.	Goods Traffic.
<i>Miles</i>		<i>Persons.</i>	<i>Tons.</i>
668	South Indian - - - - -	807	103
1,116	Rajpootana - - - - -	741	321
930	Northern Bengal - - - - -	382	352
79	Tirhoot - - - - -	572	387
29	Muttra Hattras - - - - -	776	45
87	Cawnpore Furruckabad - - - - -	509	108
149	Nagpur Chattisgurh - - - - -	208	120
161	Rangoon Irrawaddy - - - - -	876	254
198	Bhownagar Gondal - - - - -	451	104
86	Mysore - - - - -	352	40
TOTAL - 2,798			
	Average over whole of Narrow Gauge - - - - -	616	228
	Add, 10 per cent. to Passengers for other Coaching Traffic, say - - - - -	64	—
	TOTAL Average Daily Traffic per Mile on Narrow Gauge - - - - -	680 Passengers	228 Tons of Goods

The average passenger traffic is 50 per cent. greater on broad gauge lines than on narrow.

Average goods traffic is nearly four times as great on broad gauge as on narrow

But omitting the East Indian Railway,—

Average passenger traffic on rest of broad gauge is 830 persons, including other coaching traffic and average goods traffic is 810 tons

COMPARISON between the EAST INDIAN, the GREAT INDIAN PENINSULA, the RAJPOOTANA-MALWA, and the BOMBAY, BARODA, and CENTRAL INDIA RAILWAYS in 1883, and in other Years when the Traffics on the other Lines approximated to that of the Rajpootana-Malwa in 1883

	East Indian Railway Main Line.		Great Indian Peninsular Railway			Rajpootana Railway		Bombay, Baroda, and Central India Railway		
	1872	1883.	1875.	1876	1883.	1882.	1883.	1875.	1878	1883.
<i>(a)—Length of Railway</i>										
(1)—Length open in the year named - - - - - Miles	1,281	1,506	1,266	1,266	1,455	1,115 5	1,187	480	444	461
of which were doubled - - - - -	415	468	327	325	324	0	0	22	28	23
<i>(b)—Traffic on Railway</i>										
(1) Average number of passengers passing over each mile of line daily - - - - - Persons, No	1,007	1,609	600	668	876	741	800	92	924	1,465
(2)—Average number of tons of goods passing over each mile of line daily - - - - - Tons	728	2,084	504	783	1,120	521	510	380	502	1,095
<i>(c)—Loads carried in Trains</i>										
(1)—Average load of passenger trains - - - - - Persons, No	210	260	181	204	170	209.	205	257	289	290
(2)—Average load of goods trains - - - - - Tons	110	164	82	88	108	61	78	108	126	160
<i>(d)—Charges made for Transport.</i>										
(1)—Average sum charged for carrying a passenger one mile - - - - - Pies	3 23	2 78	3 62	3 28	3 06	2 16	2 16	3 3	3 04	2 71
(2)—Average sum charged for carrying a ton of goods one mile (including terminals and all other charges where there are any) - - - - - Pies	9 7	6 6	13 07	9 73	8 92	10 29	7 7	12	10 24	8 7
<i>(e)—Cost of Transport.</i>										
(1)—Average cost per train mile (passenger and goods trains taken to cost the same) - - - - - Rs	1 795	1 68	2 46	2 09	2 07	1 55	1 47	3 0	2 6	2 513
(2)—Average cost of carrying a passenger one mile - - - - - Pies	1 64	1 24	2 6	1 97	2 34	1 42	1 38	2 24	1 73	1 67
(3)—Average cost of carrying a ton of goods one mile - - - - - Pies	3 04	1 97	6 7	4 56	3 69	4 88	3 61	5 33-	4 0	3 01

Note.—Rupee 1 = Annas, 16 = Pies, 100.

Appendix, No. 13.

EXTRACT from the REPORT from the SELECT COMMITTEE ON EAST INDIA (PUBLIC WORKS),
Session 1879.

EVIDENCE OF SIR THOMAS LAWRENCE SECCOMBE, K.C.S.I., C.B., 14 March 1879

Chairman.

387. I BELIEVE that you have very recently left the control of the Financial Department of the India Office?—I have recently retired from the office of Financial Secretary, and am now Assistant Under Secretary of State for India.

388. You have for many years been connected with the Financial Department?—I have for 50 years.

389. You are, I presume, acquainted with the nature of the reference to this Committee, and I believe also with the general purport of the evidence which has been given before this Committee?—Yes, I think I am.

390. We have had a good deal of information from the officers of the Public Works Department as to the result of the expenditure which has been incurred by them, and as the greater part of this expenditure has been incurred by borrowed money, we were anxious to obtain from the Financial Department evidence as to the nature of the restrictions and regulations which from time to time have been imposed upon the Public Works Department as regards the prosecution of what are generally known as Public Works Extraordinary; will you first inform the Committee what was the nature of the regulations, if there were any, previously to the formation of the Public Works Department by Lord Dalhousie?—There were no very distinct regulations of which we in England were aware. The charge for public works before that time formed part of the general expenditure of the country, and there was no separation between the Public Works and other expenditure, except that it appeared in the accounts under the general head of Public Works.

391. And whatever expenditure was therefore incurred was met out of the ordinary revenue of the country?—It was part of the ordinary expenditure, at that time the financial result of the year was frequently a deficit, and of course the cost of public works, whatever it amounted to, tended to increase that deficit.

392. Perhaps you can inform the Committee what, subsequently to the formation of the Public Works Department in 1854, has been the course pursued by the India Office in laying down regulations to control the particular class of expenditure?—The Court of Directors had repeatedly desired to have returns showing the expenditure on the construction of public works, and as

Chairman—continued

far as they could be furnished, of the receipts from those works, but nothing effectual was accomplished during the time that the Court of Directors had the direction of Indian affairs, it was only at a later period that something more definite was attempted. About the year 1862, the balances in India being larger than were necessary, more money having been borrowed in consequence of an expectation that the general expenditure on military operations would have been larger than it proved, the Secretary of State, looking to the large amount of those balances, authorised the Government of India to expend three millions out of those balances in the completion of works of a remunerative character in progress, such as works on the Godavery, the canals in Sind, and subsidiary channels from the Ganges, but only on works of the remunerative character of which but little doubt could be entertained.

393. Up to that time all railroads had been constructed through the agency of guaranteed companies, had they not?—I have been referring only to those public works which were constructed directly under the orders of the Government, not to guaranteed railways. The railroads at that time were all constructed by guaranteed companies.

394. Then these works would, I assume, be mainly irrigation works?—They would be mainly irrigation works. In the next year, 1863, the Government of India proposed to construct barrack accommodation for their largely-increased European force, which had been rendered necessary by the mutines. The Secretary of State objected; he said he was very desirous of providing barracks for the accommodation of the troops, but, inasmuch as the money available had been obtained by borrowing, he considered that whatever sum might be taken from the balances for public works should be applied to the construction of reproductive works.

395. Then subsequently to the year 1863, another application was, I believe, made?—In 1865, the Government of India submitted plans for expending a very large sum of money, 10,000,000*l.*, during the ensuing five years on new military works, and 40,000,000*l.* or 50,000,000*l.* in the next 20 or 25 years on works of irrigation. The Government of India suggested that a large loan should be raised for the purpose, in order

Evidence of Sir THOMAS LAWRENCE SECCOMBE, K.C.S.I., C.B., 14 March 1879—*continued.*

Chairman—continued

order that the public works might not be liable to suspension from want of funds

396 Who was the Viceroy at that time?—Sir John Lawrence.

397 What was the amount which they proposed to borrow?—They did not make a definite proposition as to the amount to be borrowed, they mentioned the very large sums which I have indicated, namely, 10,000,000/ for military buildings, and 40,000,000/ or 50,000,000/ for irrigation during a certain number of years, and suggested that a large loan should be made for the purpose of carrying them on. The Secretary of State objected decidedly to any such proposition, he said he thought it would be highly injudicious to undertake to raise a loan for any amount until definite plans and estimates had been proposed and sanctioned; but that in regard to irrigation works, whatever funds might be necessary to carry out well-considered plans, he would be prepared to provide

398 Who was Secretary of State then?—Sir Charles Wood

399 Then there was further correspondence, was there not, in the year 1866 upon this subject, when Lord Cranborne succeeded Sir Charles Wood as Secretary of State?—Yes

400 What was the purport of that correspondence?—I may mention that about the year 1866 there was a very strong impulse towards the construction of public works, it was manifest from discussions in Parliament, and generally it was looked upon as a panacea for all the evils of India, and while that feeling remained propositions were made and further correspondence took place, and Lord Cranborne said generally that he was very anxious that no time should be lost in maturing plans and deciding upon such irrigation works as were most urgently required, and that he would, when the approval of the Home Government should be given, be prepared to authorise such steps as might be necessary for raising any sum that might be required

401 Then there was a reply to that proposal of the Secretary of State from the Indian Government?—In December of the same year the Government of India proposed to distinguish between ordinary and extraordinary charges on public works, and to show as extraordinary charges heavy outlay for special public works, parts of general schemes connected with important branches of the administration, such as unusually extensive projects for military barracks, for the central and district jails then in progress, and for similarly extensive projects for roads and other communications. The revenue would first be compared with the ordinary charges, and then with the ordinary and extraordinary charges, any deficit being met from the cash balance by additional taxation or a loan, as circumstances might dictate

402 But this was the first Despatch in which the Indian Government had formally made a request to the Home Government to allow a distinction between Ordinary and Extraordinary Expenditure?—Yes, such a distinction as afterwards existed. At a very early period, even during the time of the Court of Directors, the term "Extraordinary" had been used in the Estimates, but not as separating that expenditure from ordinary expenditure.

Chairman—continued.

403. But this was the first occasion upon which the Indian Government had made a request to the Home Government to be allowed to expend annually a certain sum of money under the head of Extraordinary Expenditure, which expenditure was to be made in the nature of an investment?—That was so.

404. What was the reply of the Secretary of State to that proposal?—In reply to that proposal, Lord Cranborne approved of making a distinction in the accounts between Ordinary and Extraordinary Charges for Public Works, but he said great care was to be taken that no item should be included as an extraordinary charge relating to repair or construction of works which were not exceptional in their character, important trunk roads, he said, might be included, but great caution was to be exercised in admitting works other than those which were already in course of construction, and which were of essential importance to through traffic. Barracks sanctioned to meet the requirements of the large force of Europeans stationed in India since the mutiny might, he said, fairly be looked upon as an extraordinary charge. Their construction could hardly be deferred with safety, and yet the cost would be far too large to be properly debited to the revenue of two or three years. Jails were not to be admitted, so far as they could not be constructed out of revenue, he was of opinion that they should be deferred rather than increase the debt.

405 Then Lord Cranborne was succeeded by Sir Stafford Northcote as Secretary of State?—He was

406. And in the ensuing year the proposals of the Indian Government were again revised when the Budget Estimates came home?—Yes.

407 Will you state to the Committee what was the nature of the criticisms of Sir Stafford Northcote?—The Budget Estimate of the Government of India for 1867-68 included jails among Extraordinary Charges, and the Secretary of State pointed out the necessity that existed for taking care that no expenditure of an ordinary character was included under Public Works Extraordinary, but that, as a general rule, all works should be treated as "Ordinary," excepting those which might be expected to prove directly remunerative, that is to say, capable of yielding a profit beyond the interest on their cost, and great works, such as the construction of the new barracks, which had been specially sanctioned as "Extraordinary" by the Home Government. There were several works, he said, included in the Public Works Department Account of the proposed expenditure of the special grant, which did not appear to him to fulfil these conditions. He concluded by saying, "If that distinction be made, the Extraordinary Expenditure will be the amount that may be properly provided for by loan"

408 Therefore the principle which was laid down in this Despatch was, that with the exception of barracks for the European troops, no works except those which would be directly remunerative were to be included in the category of Public Works Extraordinary?—That was so.

409 Was any money raised by loan spent upon the construction of barracks as a matter of fact?—It is very difficult to answer that question directly,

Evidence of SIR THOMAS LAWRENCE SEECOMBE, K O S I, C.B., 14 March 1879—*continued*

Chairman—*continued.*

directly, because there was certainly no money raised purposely with that object, nor were any public loans raised specially for public works. As far as the cash balances would provide the required funds, they were applied to the construction of any works which were authorised, and whatever deficiency existed on the general account, including the expenditure on Public Works, was provided by loan.

410 During those two years was there a deficit in the ordinary account?—In 1866-67 there was a deficit of 2,517,000 *l.* In 1867-68, there was a deficit of 1,007,000 *l.*, that is exclusive of the expenditure in the second of those years of 602,000 *l.* on Public Works Extraordinary.

411 Can you recollect if the cash balances were lower at the end of those two years than they were at the commencement?—They should not have been, unless there was a withdrawal of deposits, which affect our balances in India. During the years 1866-67, when the deficit was 2,517,000 *l.*, we borrowed in India and in England 3,070,000 *l.* therefore there should have been an increase in the cash balance at the end of that year. In 1867-68, when the deficit was 1,007,695 *l.*, and the expenditure on Public Works Extraordinary was 602,462 *l.*, making together 1,610,000 *l.*, we borrowed 1,900,000 *l.*, therefore the balances should have increased again that year.

412 We have now arrived at the financial year 1867-68, sanction having been given in the preceding year to the construction of barracks with borrowed money, when was that sanction withdrawn?—It was withdrawn in 1868, and although barracks had been included in the estimates, under "Public Works Extraordinary," there was never any charge for them included in the accounts under that head.

413 Therefore as our reference mainly applies to works which have been constructed with borrowed money, we may practically exclude the construction of barracks?—Certainly.

414 Now we come to the next year, namely, 1868, the Secretary of State, I believe, again addressed the Government of India upon the subject of these Public Works Extraordinary?—He did, and in his letter he said that he was of opinion that for reasons he gave in the Despatch, Irrigation Works and Special Fund Works (that was the Bombay Special Fund) were the only items that should be classed as Extraordinary.

415 Therefore the result of the communications which have passed between the Indian Government and the India Office during the past three years was to this effect, that the Indian Government had been constantly making requests to the Home Authorities to borrow money for the purpose of constructing different works, while on the other hand the Home Authorities had been gradually tightening and diminishing the purpose for which money might be so borrowed?—Decidedly.

416 Now the next Secretary of State was the Duke of Argyll, and he again, I believe, very shortly after he assumed office, addressed the Government of India upon this subject?—In January 1869, the Government of India, with reference to irrigation and similar special purposes, informed the Secretary of State that the probable outlay that would be needed to carry out

Chairman—*continued.*

the works which were likely to be approved for execution in the next 10 years, would amount to about 30 millions, and that if expenditure on railways were added, the outlay on reproductive works (irrigation, railway, and special fund works) would be from six to eight millions annually.

417 Previously to this Despatch had not a decision been arrived at by the Indian Government to discard the indirect agency of the guaranteed companies?—Yes.

418. Therefore this expenditure which was to amount to 30 millions altogether, and would be from six millions to eight millions annually, included a class of work which previously had been constructed by the guaranteed companies, and the capital expenditure of which did not appear in the annual accounts?—Quite so.

419 And what date was that decision arrived at?—In January 1868.

420. It was in consequence of the Indian Government having undertaken, in addition to the construction of irrigation works, the construction of railways, that the Duke of Argyll addressed them, was it not?—It was, and his instructions were to the following effect: he said he was sensible of the great importance of proceeding with irrigation and other remunerative works as rapidly as possible, with due regard to economy of construction, and was most anxious that no delay should arise from want of funds. As a general principle, he observed, it was desirable that loans shall be raised in India, if they could be obtained on terms nearly as favourable as in England, and it was difficult to decide what additional interest would be counterbalanced by advantages which otherwise attached to loans raised in India. Again, on the 31st of August 1869, the Secretary of State referred to the importance of obtaining accurate information as to the remunerative character of the expenditure in India on irrigation works: he stated that the information hitherto received from the several Governments was not sufficiently precise, and requested that statements might be forwarded periodically from India, showing from each district the amount of the land revenue in 1856-57, the amount received in the year last completed, the expenditure on irrigation works (distinguishing that on new works from that on maintenance and repairs), since 1856-57, the increase of revenue due to irrigation, and the increase due to other causes, desiring that those statements might be carefully framed by Public Works and Revenue officers.

421 That was, I suppose, with a view to obtaining accurate information as to the returns which might be fairly credited to the irrigation expenditure which had been sanctioned in the past?—Yes, whether collected with the ordinary revenue or as water rates.

422 Did the Indian Government quickly comply with that request?—In 1870 the attention of the Government of India was called to that request, and no reply having been received from that Government, and returns only from Bombay, which were imperfect, the Secretary of State again requested, in January 1872, that the information required might be furnished. Then in 1871, 1872, and 1873, came the inquiry before a Select Committee of the House of Commons on East India Finance,

Evidence of Sir THOMAS LAWRENCE SECCOMBE, K C S.I., C.B., 14 March 1879—*continued.*

Chairman—continued.

Finance, and that Committee directed their attention early to the accounts. In the first Report made by that Committee certain deficiencies in the accounts were referred to, and Mr. Harrison, the Comptroller General, who was in England at the time, was in consequence directed by the Secretary of State to prepare new forms of accounts, in order to show as clearly as possible, among other things, the expenditure upon irrigation and other public works, and what was the outturn of them.

423 Did the Indian Government then send home sufficient and satisfactory information upon that request?—They had no time to adopt the new form in 1872, but they sent home a good deal of information. It was, however, very imperfect, and in August, and October 1872, the Secretary of State applied for further and clearer information.

424. As Financial Secretary, it was not sufficiently precise to justify you in embodying it in the account which was to be submitted to Parliament?—It was not possible to obtain from it anything like an accurate statement of what we got for the money expended.

425 I think that was almost the last communication that was addressed during the tenure of office of the Duke of Argyll to the Indian Government upon the subject of these Public Works Extraordinary?—It was I am speaking always of those addressed from the Financial Department, occasionally Despatches go out in the Public Works Department, which being more especially confined to the Administrative than to the Financial view, somewhat conflict with the papers or returns which emanate from the Financial Department.

426 But there is, I believe, no Despatch of which you were cognisant which emanated from the Finance Department requiring greater information subsequent to the date of October 1872?—Not any.

427 Therefore, during the tenure of office of the Duke of Argyll, he re-affirmed the conditions which had been laid down by Sir Stafford Northcote as regarded Public Works Extraordinary, and he requested that information should be supplied to the India Office, in order that they might see what returns were attributable to the expenditure which had already been incurred?—He did.

428 And although the expenditure for some years previously to his retirement from office apparently increased, that increase was almost entirely due, was it not, to the State undertaking the construction of railways in place of the guaranteed companies?—Yes, no doubt to a great extent.

429 But not entirely?—I can give you the amount expended in each year on irrigation and on State railways up to the date of his retirement.

430 If you were to take for the five years preceding 1867 the amount expended in railway construction by the guaranteed companies, and then compare it with the amount expended in the five years subsequently to 1872, both by the State and by the guaranteed companies, you will find that although in the accounts the amount during the latter period seemed greater than in

Q 61

Chairman—continued

the former, it is not so?—It is due to the construction of State railways.

431 The capital account of the guaranteed companies being excluded from the ordinary revenue and expenditure account presented to Parliament?—Yes, we only show the traffic receipts and guaranteed interest.

432 Now we come to the time when Lord Salisbury was Secretary of State for India, and in the first Financial Despatch which he sent out in review of the Budget of 1874, he laid down certain principles regarding the construction and prosecution of public works, did he not?—He did, he said that the only ground on which the distinction between the ordinary and the extraordinary works could be justified was, that the works included under the latter head would prove to be remunerative by yielding, in the shape of annual income, a sum equal to the interest on the money expended on their construction, including interest for the period subsequent to the commencement of each work during which no income was obtained. That it was apparent that many of the State railways would not yield such an income, and that many irrigation works would be unremunerative in the same sense, and as the assumed ground on which some of those works had been excluded from charges against revenue did not really exist, the cost of them should be removed from the class of public works extraordinary. Works for the prevention of famine, he said, might, however, be executed, and if the money for meeting the expenditure could not be obtained from ordinary income, the works might properly be constructed from borrowed money, the expenditure being included among ordinary charges under a separate head. The amount of the home expenditure was then referred to, and the expediency of increasing it, and the Government of India were requested to consider it indispensable that only works which would repay the interest on the money expended on them were to be excluded from charges against income, that the utmost care should be observed in the undertaking and prosecution of such works, and that the necessary funds be obtained in India. A statement to the same effect was made by your Lordship on the 3rd of August 1874 in the House of Commons.

433 Lord Northbrook in his evidence stated that he understood that these rules only applied to future works, but not to works that had already been sanctioned and commenced?—That is quite correct.

434. In this Despatch, I think, for the first time, sanction was given to the Indian Government to construct what were known as Famine Preventive Works out of borrowed money, although those works might not be in the strict sense of the word remunerative?—That was so.

435. I think two years afterwards the Indian Government again communicated with the Secretary of State?—Yes, in a financial letter dated the 7th of April 1876, the Government of India said, "The principle by which our expenditure upon 'extraordinary' public works has been guided is, that however advantageous the extension of railroads or irrigation works may be, it would not be right to carry them on at such a rate as would require the imposition of fresh

A P 2

taxes.

Evidence of Sir THOMAS LAWRENCE SECCOMBE, K C S I, C B., 14 March 1879—continued

Chairman—continued.

taxes The rate of expenditure has accordingly been regulated by calculations which are given in detail in the forecasts of 1873 and 1875. These calculations show that any additional interest on account of money borrowed for the purpose of constructing extraordinary works, will be met from the increased receipts derived from similar works, which have been, or will, from time to time, be completed and brought into operation. We consider that this method of calculation, which has now been tested by the experience of three years, is safe, and that it enables the Government to control the expenditure upon extraordinary works more efficiently than if works were to be admitted under that category merely upon the faith of estimates of the returns which they may give, for such estimates are not unfrequently fallacious."

436 Therefore, in reply to the principles which had been laid down some eighteen months before by the Secretary of State, the Indian Government suggest an entirely different principle, do they not? They propose that a certain sum of money should be taken out of the general revenues of India, for the purpose of making good the difference between the net receipts and the working expenses, and interest chargeable upon Public Works Extraordinary, and that this amount should become stereotyped, and that so long as it was not exceeded the Indian Government might continue to borrow for the purpose of the prosecution of railway and irrigation works?—That was the effect of their proposition.

437 This, I believe, was the last Financial Despatch which came from Lord Northbrook?—Yes, Lord Lytton took his seat on the 12th of April 1876, and this Despatch was dated the 7th of April.

438 I believe Lord Northbrook had made special arrangements in order that he might consider the Budget for the incoming year previously to the advent of his successor?—He had.

439 What did Lord Salisbury say in reply to that proposal?—Lord Salisbury replied on the 10th of August 1876, to the effect that it must be apparent to the Government of India that if works upon which loan funds have been expended are not remunerative to the extent of paying the interest on the money expended on them, and additional works be annually undertaken which will be unremunerative in a similar degree, every additional work must tend to increase the annual charge for interest which will fall upon the general revenue. Even, however, if the charge for interest on those undertakings should not increase, it did not appear to him that that consideration would be a justification for perpetuating the annual charge on that account. He then repeated the instructions contained in his letter of July 1874, that any sums required for Public Works Extraordinary must be raised in India, and that he could only consent to borrow in this country when extraordinary circumstances rendered it necessary. But in the same Despatch he said, that with regard to works under construction, the rules which he deemed necessary to be observed in regard to that expenditure in future, as laid down in his Financial Despatch dated the 23rd July 1874, No 387, were correctly described by

Chairman—continued.

the Government of India as not intended to apply to works under construction. They considered that in regard to works hereafter to be undertaken, the adoption of those rules might be productive of inconvenience, and that as interest on money borrowed had been paid year by year out of the general revenues, and had not been provided by increasing debt, the expenditure on public works might be continued on the supposition shown in their forecasts of 1873 and 1875.

440 Therefore, in reply to the request of the Indian Government to substitute this new proposal, the Secretary of State simply re-affirmed the principles which had been laid down by his predecessor?—He did, except with regard to works under construction.

441 Then in the next year, 1877, I believe a good deal of attention was given by the Financial Department to the forms of account which were presented to Parliament with regard to these Public Works Extraordinary, and forms were sent out to the Indian Government by which both the revenue derived from, and the ordinary expenditure connected with, these works, should be separated from the ordinary expenditure and revenue of the Government of India?—That was so.

442 And now the accounts are presented to Parliament in such a way as to show what the exact cost to the State annually is of this policy of Public Works Extraordinary?—Yes, that is the intention of the present form of account, which is being carried out as fast as possible. There is one distinction which I should mention, the accounts as now presented take no notice of interest during the period of construction, which had been given for certain works in the accounts for the year 1875-76.

443 The intention of the account is to give, as time goes on, full and complete statements of all the charges connected with Public Works Extraordinary as far as they can be ascertained?—It is.

444 I suppose that every year we may hope that the Government will be supplied with greater details, and that the expenditure side will become more and more accurate?—There can be no reasonable doubt of that. There is a difficulty between the revenue and the public works offices in Madras and some other parts of India, in ascertaining how much revenue is due to irrigation, and how much is not, but with such a form of account it certainly ought to be produced completely within a year or two.

445 There is also a difficulty, apart from the question of charging interest upon construction, in ascertaining the full cost of the establishment?—That is one of the difficulties, it must be an estimate, it could not be an actual statement of cost.

446 And I assume also there would be a difficulty with regard to pensions?—That has not yet been taken into account.

447 Do you think that it will ever be possible accurately to estimate what sum should be debited to the department for pensions?—I see no reason why it should not be done eventually, it ought to be done, in order to give a clear statement of the cost and out-turn of these works.

448. And

Evidence of Sir THOMAS LAWRENCE SECOCOMBE, K C S I, C B, 14 March 1879—continued

Chairman—continued.

448 And your object, of course, as Financial Secretary, in suggesting the forwarding of those accounts was to give as accurate an account as was possible, to Parliament, of the results of this Public Works Extraordinary system?—Certainly, and not only to give it to Parliament, but it was important for our own information to see what we were really doing

449 From your experience I suppose you attach enormous importance to an accurate form of account as a check upon the expenditure upon Public Works Extraordinary?—In undertaking works of that nature, unless we have a very distinct plan laid down as to the conditions on which such works should be undertaken, and then have an accurate and intelligible account of what is done, there must always be great danger in the regulation of the finances

450 In fact, it is not so difficult to lay down conditions which are sound in themselves, as to enforce those conditions?—By no means

451 And unless you have an accurate form of account as regards those public works, it is impossible to tell whether your conditions have been infringed or not?—Quite impossible

452 I believe, subsequently to the communications which took place on the subject of accounts, another Despatch was sent out to the Government of India, in the year 1877, relating to the rules bearing upon expenditure upon public works?—On the 12th of October 1877, another Despatch was sent, in which it was said that the rule that the expenditure on Productive Public Works must be met by borrowing in India must be kept steadily in view, although the existing circumstances of India prevented the application of that rule with all the rigour which, under normal circumstances, it would have been necessary to require. It was the famine expenditure in India which rendered it impossible to carry it out.

453 Then, in consequence of that famine expenditure in India you were not able rigidly to adhere to the principle which was laid down that all sums for Public Works Extraordinary should be borrowed in India, and I believe you addressed the next year, in April 1878, a Despatch to the Government of India upon that subject?—We did. Considerable sums having been borrowed in England to enable the Government of India to meet famine expenditure, and additional taxation having been imposed in India to form a Famine Insurance Fund which the Government of India proposed to appropriate to keeping down debt in India instead of repaying a portion of the debt incurred in England, the Secretary of State, on the 1st April 1878, informed that Government that whenever the demand for bills, and the state of the exchange would admit, the sum which had been provided from the Home Treasury to meet famine expenditure should be repaid from the million and-a-half which was to be raised annually on account of famines and that such an arrangement would be strictly in accordance with the rule that all sums required to be obtained on loan for productive public works shall be raised in India, because if we raised money here on account of the famine, and instead of repaying us the Government of India appropriated the Famine

061.

Chairman—continued.

Insurance Fund to expenditure in India, or to pay off debt in India, whenever a famine occurred again they would come to us for assistance, and we could not show but that the money which we borrowed for famine purposes had been expended on public works

454 And therefore, unless some such rule as this were laid down, whenever any exceptional difficulty, such as that of famine, prevailed in India, you would have your policy reversed, you would have the debt increased in England, and whatever surplus there might be, applied to the diminution of debt in India?—Quite so.

455. I think we now come to the second Financial Statement of Sir John Strachey, in which he proposed to put on additional taxation for the purpose of meeting the very heavy famine expenditure which they had had to meet during the past five years, what has been the main point of the Despatch which the Government of India sent home?—In the Annual Financial Statement of the Government of India for 1877-78, it was laid down that expenditure for the relief of famine must be regarded as an ordinary charge, and for reasons explained by Sir John Strachey in the Legislative Council on the 27th December 1877, the Government of India was of opinion that the annual cost of famine, in expenditure and loss of revenue, could not be taken at less than 1,500,000 £ on an average. In the Financial Statement of 1878, for the year 1878-79, measures were indicated for raising that sum annually as a famine insurance fund. In their financial letter, dated the 16th September 1878, the Government of India again referred to the same subject.

456. This Despatch relates to the Budget for 1878-79, which was brought in in March 1878?—Yes.

457. Then the Government of India, in addition to their Financial Despatch of March 1878, again addressed the Home Government in September 1878?—They did

458. And they made certain proposals as regards the construction of productive or re-productive public works, did they not?—Yes, their proposition was, adverting to the difficulty of discriminating between works wholly productive and those only admissible as providing against the effect of famine, to accept a yearly maximum dead weight charge, to be paid as experience might suggest, for works constructed as productive, whether under the existing strict conditions, or as then proposed, in order to prevent famine, or give protection from famine, or diminish the expenditure for the counteraction of famine, it should occur. In other words, they would limit to a specific maximum amount the net expenditure for the interest on the capital cost of all such works and their maintenance, after setting off all the net income yielded by the works. That amount they would for the next five years fix at 25 lacs of rupees in any one year in addition to their existing net liabilities, and they thought that the famine insurance fund of one million and a half sterling might be safely reduced by that sum, on the consideration that the construction of any works not fully productive, according to the existing definition, which might be thus facilitated, would cause an equivalent reduction of the ultimate

Evidence of SIR THOMAS LAWRENCE SECCOMBE, K.C.S.J., C.B., 14 March 1879—continued

Chairman—continued.

mate liability on account of famines when they occur.

459 That proposal is a little complicated. I think it will be necessary to unravel it a little, in order to make it perfectly clear what the intention of the Government of India was. They suggested, in the first place, that a certain sum should annually be taken from the revenues of India to meet the cost of the Public Works Extraordinary?—A dead-weight charge.

460. That proposal is not very dissimilar from one that was made by Lord Northbrook in 1876. In addition to that proposal, they further suggested that a certain portion of the Famine Insurance Fund should be thus appropriated, and they were to borrow to an amount the interest of which should not exceed 25 lacs of rupees?—Quite so.

461 And they proposed that the interest which was to be paid upon the sum so raised was to come out of the Famine Insurance Fund?—Yes.

462. You did not assent to that proposal?—No.

463. It is a very important proposal, and I think it is worth investigating a little further as I understand, the object of the Famine Insurance Fund was to raise out of revenue a certain sum which might either be appropriated to the reduction of debt or to the prosecution of famine preventive works?—Yes.

Sir George Campbell.

464 After you had first paid off the debt for the former famine?—If after we had raised in England, say 10,000,000*l.*, on account of a famine, and reduced the remittance from India to that extent, they recouped us that 10,000,000*l.*, we should have it to use on a future occasion.

465 But you must recoup the millions spent on the last famine first?—Yes.

Chairman.

466 The object of the Famine Insurance Fund was to obtain a certain sum from revenue which might annually be devoted, either by the reduction of the debt or by the construction of works, to the prevention or mitigation of famine in the future?—It was.

467 Then this proposal is of a very different nature, it is to raise a certain sum which would increase the existing liabilities of the Indian Government, and to appropriate a certain proportion of the Famine Insurance Fund to provide the interest of those increased liabilities?—Yes, the effect of it would have been thus, that we should have included on the Revenue side of our account 1,500,000*l.*, or thereabouts, of new taxation, imposed with a view to the mitigation of famine. We should have shown on the Expenditure side only interest, which was never to exceed 250,000*l.* on the money which the Government of India would borrow and expend, and we should show on the same side only such a sum as they might expend on protective works within the limit of their Famine Insurance Fund. So that in point of fact, England would never have been recouped one penny of the sum which India had borrowed for famine, for they would retain that in India, shutting out

Chairman—continued.

all charge on account of famine expenditure, not one penny of the sum which they would expend out of the 6,000,000*l.* would be shown on the expenditure side, but they would show a surplus in the year which would not exist, and to that we objected.

468. Did you make any alternative proposal, or did you re-affirm the principle which you had previously laid down?—I will cite the Despatch in which we objected to the proposal. On the 20th February 1879, the Secretary of State said he was unable to agree to the proposed arrangement, considering that the present condition of the finances would not justify any loan for outlay on protective works, or any expenditure on them beyond what might be met from the receipts from special taxation recently imposed. The first claim on those receipts, he observed, being that of the Home Government for repayment of debt incurred here on account of famine, the sum of 750,000*l.* should be held available for remittance to England in the next and ensuing years on that account, the remainder might be appropriated at their discretion to extinction of debt, to relief of famine, or to the construction of protective works, not necessarily directly remunerative, but productive in the sense of guarding against a probable future outlay in relief. The Secretary of State said he could not, under present circumstances, sanction the raising of capital by loan for the construction of works which did not distinctly fall under the regulations laid down for productive public works. To guard against misapprehension, he deemed it necessary to draw attention to a statement in the letter from the Government of India, that they had omitted from the definition of productive works the condition prescribed in the Secretary of State's Financial Despatch of 23rd July 1874, that the works must be expected to be remunerative by yielding in the shape of annual income a sum equal to the interest on the money expended in their construction, including interest for the period subsequent to the commencement of each work during which no income is obtained, an omission which the Government of India inferred that they were justified in making by the tenor of Lord Salisbury's Despatch of the 27th September 1877. In that Despatch, which directed that the term Productive Public Works should be substituted for Public Works Extraordinary, it was stated that no change was intended to be made in the character of the works henceforth to be admitted into that category, and Lord Cranbrook added, that for the conclusion of any work in the productive class, it was necessary that there should be a prospect of its repaying within a reasonable time the whole of the interest incurred on the money expended in its construction, though it was immaterial whether the interest which accrued during the progress of construction was treated as a charge against the income of future years, or was added to the capital on which interest was to be paid.

469 And this, I think, is the last communication which you have addressed to the Indian Government upon the subject of the Famine Insurance Fund, or protective works?—That is so, there was another communication upon the same day, but it was comparatively unimportant.

470. Now

Evidence of Sir THOMAS LAWRENCE SECCOMBE, K C S I, C B, 14 March 1879—continued.

Chairman—continued.

470 Now you have placed before the Committee, in consecutive and chronological form, all the main Despatches which have passed during the last 20 years between the Home Government and the Indian Government upon the subject of Public Works Extraordinary expenditure. I think what must strike anyone is, that there has been constant conflict between the two Governments, the tendency of the Indian Government being rather to ask for additional powers, in order that they may expend more upon those works, and the Home Government, on the contrary, rather being disposed to restrict and to limit this expenditure?—That has been so

471 Two perfectly distinct and contradictory systems of control have been imposed, one by the Home Government, and the other by the Indian Government. The Home Government laid down the principle that no works are to be constructed with borrowed money, except those which will prove to be remunerative, whereas the Indian Government, on the other hand, contend that inasmuch as all the forecasts of the Public Works Department are based upon the assumption that a certain sum from the revenues must be devoted to meet the difference between the receipts and expenditure upon these works, that is the principle which should be accepted?—Yes, that is the principle they adopt generally, but when referring to the depreciation of silver, in another Despatch, they fully admit the general principles laid down by the Secretary of State. Their action is somewhat inconsistent, in some Despatches they admit the general correctness of our conclusions, but in others they indicate a desire to depart from our propositions, and adopt others

472 By my question I did not mean to imply the least blame upon the Indian Government, it is undoubtedly the duty of the Secretary of State in Council to limit and control the expenditure in India, and it will be generally found in the nature of things there is a greater tendency on the part of the Home authorities to restrict expenditure than in India. Still it is the fact that I have correctly described the two principles for which the two parties, the Government in India and the Government in England, respectively contend?—Decidedly

473 You have greater experience than any man alive in Indian finance, and I would like to ask you your own personal opinion about this controversy, not that you will differ from the published Despatches, but that, having thought over this subject very often, supposing that you had absolute power to impose what conditions you liked, what would you do?—I could devise no better plan than that which has been laid down by the Secretary of State. I think those conditions are perfectly sound, and I think, if I may be allowed to say so, it is imperative that they should be acted upon, and that the Government of India should be limited in their expenditure in India on productive public works, and not limited merely to the amount which they might be able to borrow in this or that year, but that the very outside should be 2,500,000*l*, which I am satisfied is as much as they can borrow on reasonable terms in India, and provide occasional

0 61

Chairman—continued.

ally for such emergencies as they should take part in helping to meet

474 Therefore, at the present time you think that the Indian Government ought not to expend upon this particular class of work more than 2,500,000*l* annually?—I think so. An opinion somewhat to the same effect was expressed before this Committee by Lord Northbrook

Sir George Campbell.

475 Including all the railway construction?—Yes, including all the railway construction and State works

476 That means all railways, because all railways now are State railways?—All new railways are State railways

Chairman.

477 It has been admitted in evidence that the establishments of the Public Works Department are sufficient to carry on works involving a much larger expenditure?—Undoubtedly

478 I suppose you would not hesitate, if you considered this a right and sound policy to follow, to reduce those establishments?—I think the sooner they are reduced the better

479 I suppose you cannot help thinking that the mere fact that there are so many able engineers in India who have not very much to do, must necessarily lead to a large number of schemes being brought under the notice of the Indian Government?—No doubt the officers of the Public Works Department are zealous, like officers in other departments, to carry out great works, which will distinguish the Government under which they serve, without reference to financial considerations

480 In fact, the abler they are the more ambitious they are, and the more inclined to underrate the financial difficulties which it is their duty to overcome?—Yes

481 It is one thing to lay down sound principles, it is another thing to get people to respect them, and speaking in a tone of friendly criticism, what naturally occurs to one in looking over all these transactions is that the Home Government have laid down excellent principles, but have not been able to enforce them?—That is so

482 In fact, if you put a very rigid application of a test, which we all admit is a sound and proper one, upon the expenditure which has been made upon the works, not one of them would be found to comply with the description given in the Despatches?—I believe that to be the case

483 Would not it be wise to see if we could not hit upon some other means of checking the expenditure, which, although it might contain principles less sound in themselves, yet would apply a more practical control over this expenditure?—If such a plan could be devised

484 You have been for a very long time head of the Financial Department, and without paying you undue compliment I think it very unlikely that any Secretary of State could have a more experienced and more able or more pertinacious adviser than you have been, now you have succeeded in carrying all the Secretaries of State with you in these Despatches in laying down certain sound principles, but, unfortunately, one

cannot

Evidence of Sir THOMAS LAWRENCE SECCOMB, K C S I, C B, 14 March 1879—continued

Chairman—continued

cannot deny that they have not been complied with, now do you think it likely that anybody else will be more successful than yourself in the future?—It is a question in which great interest is taken by members of the Council of India. The Financial Secretary is an officer of the Secretary of State, he can only submit propositions to the Secretary of State, and as your Lordship is aware, they are referred to committees of the Council, and are very fully considered. All these most recent propositions have been approved by the Council of India after very full consideration.

Mr. Fawcett

485 But not in India?—No, by the Council of India, the Council of the Secretary of State, and there is a determination, at present, to see that they are carried out.

Chairman

486 What occurs to me as one of the great difficulties of the present system is that a work may be sanctioned upon the supposition that it will prove remunerative, money is borrowed, the work is commenced, and proceeded with, and then when some progress has been made it is discovered that the estimates require revision, and that practically there is no prospect of this work proving remunerative, that has happened, I am afraid, more than once?—It has.

487 Now what would you do with such a work, it does not come within the terms of the conditions laid down, and it is difficult to transfer it to any other account except that of the Public Works Extraordinary?—Of course, that is a difficulty which the Secretary of State has had to keep in view. However carefully estimates may be prepared, there is no doubt that they are almost always liable to error, and he has laid down distinctly that if during the progress of a work it should be found that the estimates were altogether wrong, such a work should be removed from the class of productive public works constructed out of borrowed money, and so make the Government responsible for finding the means out of their ordinary expenditure.

488 The great merit, it seemed to me, of the new form of account is, that every large work which is constructed by the Public Works Department with borrowed money is debited with the cost of maintenance, and the interest due upon the sum raised for its construction. Therefore anybody can see at once whether it is or is not remunerative, that is the case, is it not?—It is.

489. Now, supposing you transfer a work which has been commenced with borrowed money to another account, and include it in the ordinary expenditure, the funds for the prosecution of that work must come out of the ordinary revenue?—Yes.

490 If the ordinary revenue and expenditure are nicely balanced, it is quite clear that this work must either be stopped, or that the money must be borrowed for its construction.—Clearly so; that event has been contemplated in the papers of the Government of India. They went so far in one of their letters as to say that in such a case the works should be stopped.

Chairman—continued.

There is a difficulty with regard to our account which it is important to keep in view. That account will not show the real effect of the work until it has been completed, it will be comparatively useless until the work is completed, for the purpose of showing whether that work is really remunerative or not, but during the construction of the work, the officers of the Government and the Government of India would become aware whether a work was being constructed within the estimates, and would be in a position to judge what the probable out-turn would be when it should be completed. So, therefore, if a work during construction should be found to be much more expensive than had been estimated, and there was no prospect of a larger return, that work clearly should not be pressed on to such an extent as to embarrass the finances if it were transferred to the ordinary expenditure. That appears to me the best mode of meeting the difficulty.

491. Still now, as a matter of fact, I will assume that there will be surpluses upon the ordinary account for the next four or five years, a work has been sanctioned as a public work extraordinary, or, as they are now called, I believe productive works, and it is put in that category, and the money is borrowed for its construction, so long as it remains in that category the cost of maintenance and interest will be charged against it, it is found, however, that it will not be remunerative, it is transferred to the ordinary account, and is made up out of ordinary revenue, and year after year a certain amount of surplus revenue is devoted to the construction of that work, the result is that the work is constructed out of the revenues of India, the cost of it, and the interest which would otherwise be charged against it, would be altogether omitted from the account, and the only fact in connection with that work which will appear upon the accounts is that the Government get a certain revenue from it?—No, that is hardly so. If the expenditure were transferred to ordinary charge any income from that work would be transferred to ordinary revenue.

492 Is not the process by which that work passes from extraordinary account to ordinary account likely to mislead?—The Government of India and the officers of the day have a direct interest in keeping their expenditure within their income, and there is a very large class of public works many of which are remunerative, which are shown now under Public Works Ordinary, and the works referred to would go with them.

493. Supposing this work, indicated by my hypothesis, were constructed out of surplus revenue, it would absorb a certain amount of surplus revenue which would otherwise go to the reduction of the debt, and therefore it is much the same thing as if it were made out of borrowed money, is it not?—No doubt the Government would be saddled with a bad speculation, and must make the best of it.

494. And do you not think that if you would keep this bad speculation in the account of the Public Works Department it would stand in the eyes of the public as a warning of the somewhat sanguine estimate of the Government?—If you could

Evidence of SIR THOMAS LAWRENCE SECCOMBE, K.C.S.I., C.B., 14 March 1879—continued.

Chairman—continued.

could do that without allowing further expenditure on account of it to be provided by borrowing, that might be done, or works which had once been included and had been removed, and were no longer to be constructed by borrowed money, might be shown in a separate statement; by that arrangement you would accomplish the end you have in view.

495 I would like to put an alternative principle to that which has been so continuously supported by the India Office, it does not exactly resemble the suggestion of the Indian Government, but there is a certain amount of similarity between them. The Indian Government propose that the dead-weight interest for Public Works Extraordinary should be the same amount as it is now for a certain number of years to come, and they further propose that a sum may be borrowed, the interest of which is not to exceed 250,000*l*, therefore, the total dead weight upon the revenues of India would be a present sum necessary to meet the interest on money borrowed for public works, plus 250,000*l*, that, I think, is a correct exposition of the proposal of the Indian Government?—It is.

496 Now, supposing I put it in another shape, and that you were to say to the Indian Government, according to your forecast, you will want 2,000,000*l* to make good the difference between the receipts and the expenditure upon your Public Works Extraordinary, we will allow you to spend sums so long as you keep within that margin, but we warn you that three years hence we shall require that amount to be reduced, we shall wish it to be revised every three or five years, with the view of gradually diminishing the dead weight upon the revenues of India, but we shall require every work, whether protective or famine preventing, or a work which is necessary upon political or military considerations, to be included in that category. Do not you think we shall be able to get a greater hold over the Public Works Extraordinary expenditure by laying down such a proposal than by sending out principles which though sound in themselves are very difficult to enforce?—I think the objection to that scheme would be, that works would be undertaken, and if they were not remunerative that amount must certainly increase; you would therefore find yourself in this position when the time came at which you would say the amount must be reduced, that you would have works in progress which would render it impossible to reduce the amount, and how is the Government then to keep within the specified amount of interest?

497 No doubt it would be subject to that danger, but if the expenditure on public works is to form an essential part of the annual statement of the Finance Minister, both the Indian Government and the Home authorities would be able to see annually whether the amount which they so appropriated would be exceeded or not?—But surely the object is to prevent the item for works being exceeded, and that you can only do by preventing works being undertaken which will not be remunerative.

498 I quite agree with you, but the defect of the present system, as it appears to me, is that

0 61

Chairman—continued.

the Indian engineers of the Public Works Department send in estimates for a certain work; they have gone carefully through those estimates, and they conscientiously believe them to be accurate, you are bound to accept those estimates, and having accepted those estimates, the work is sanctioned, and when it is once commenced, as you know, it is excessively difficult to prevent its being continued. It seems to me that under the present system you are subject to just the same difficulty that you would be under my proposal, but with this difference, that you would be able then to say to the Indian Government, You have constructed that unremunerative work, and until you can bring down your ordinary expenditure to the sum which we have set apart, we will not allow you to construct any more works?—The proposition of the Government of India is that they shall have a certain dead weight of charge allowed them, whereas your proposition is, that instead of the Government having whatever benefit will be derived (and it must be expected to be considerable) from works which are now under construction, but which are not yet paying, we should fix a certain time when a reduction of that dead-weight charge is to be made. Now I do not think that it would be practicable to do that. I do not think that General Dickens, who has gone through these accounts very carefully, and who said that he thought 6 per cent. would be obtained from a large number of these works, could give a very definite estimate as to when that result will be attained. Therefore you would be giving an opportunity, by that dead-weight allowance which the Government of India have not at present under the system which the Secretary of State has laid down, to undertake works which will not be directly remunerative.

499. But the Secretary of State has not assented to the principle that a certain sum shall be appropriated from the revenues of India for the purpose of making good the deficiencies of the Public Works Extraordinary, but we all know as a matter of fact that that is what takes place; and would it not be wiser to recognise what is almost inevitable, and rather than find money, when it is clear that these works will not pay, to lay down principles capable of stringent application?—I think it is much more important to limit the expenditure. You are liable to famines, and you are liable to changes in regard to remittances, and what do we find? The House of Commons is most reluctant to give us power to borrow a penny. The Government of India in all these arrangements show a very distinct anxiety that we should borrow again in this country. Now, how is that to be prevented, unless you tie them down to constructing productive public works only to such an amount as will be within that which they can borrow in India?

500. In fact, you are rather alarmed at any proposal which will afford the Indian Government any facilities for adding to their liabilities?—Yes, because we see that the proposition as to dead weight is in that sense; it is a Public Works Department proposition, without any sufficient recognition of the difficulties and dangers which it entails upon the Financial Department.

4 Q

501. The

Evidence of Sir THOMAS LAWRENCE SECCOMBE, K C.S.J., C.B., 14 March 1879—*continued.*

Chairman—continued.

501 The objection which I rather personally feel to the present conditions which have been laid down is, that they always give a loophole to the Public Works Department to transfer a work after it has been put in one category into another. For instance, a work is constructed, or sanctioned, as a remunerative work; then it turns out to be not remunerative, and then we are told it will be a famine preventive work, and then we are told it can be proceeded with?—That would be a great departure from the understanding with regard to famine productive works. The plan which the Secretary of State has laid down with respect to them is very distinct: three quarters of a million must be held available for remittance home annually, and three quarters of a million will be available in India out of the new taxation. Now with regard to the second 750,000 L., protective works must be constructed not out of the sum which we require for productive public works, but on works of importance for protecting us from the consequences of famine, and yielding some income. If you give them any further power they would show only an expenditure of 25 lacs annually, but might borrow 6,000,000 L., and at the time of borrowing for productive public works they might also be borrowing for protective works, and certainly the Indian market is not sufficient to supply capital for both.

502 You use the term "public works" now, as meaning "extraordinary public works", but all the principles with regard to public works extraordinary apply equally to the productive public works, do they not?—Yes.

503. Now with regard to works which are necessary upon political or military grounds which should be rapidly completed, but which are not likely to be remunerative, how would you deal with those expenses?—As ordinary expenditure, in the same way as the cost of a war, or any expenditure which is necessarily entailed upon a Government.

Chairman—continued.

504. If the Indian Government says it is absolutely necessary to make this expenditure, they will probably incur a deficit which you will have to meet by borrowing?—Yes, that will be seen at the end of the year, although perhaps not in the Estimate; if a war occurs, the Government must not hesitate to budget for a deficit, it is not as it is in this country, where the Finance Minister can raise the money he requires by an addition to the taxation; if we have a necessary war involving us in five millions of expenditure, we must show a deficit for the year, and borrow to meet it.

Mr. Onslow

505. You might have a supplementary budget, might you not?—Yes, in Lord Mayo's time you may remember that we had one.

Chairman.

506. Although you admit that the question is a very difficult one, still, on the whole, bringing the whole of your experience to bear, you prefer to adhere to the conditions which are laid down in the Despatches from the Secretary of State?—Yes, I have no doubt of the soundness of them.

507. At the present time you are very much alarmed at anything which will greatly increase the liabilities of the Indian Government?—The present position of the Indian Government should be understood. We have no power to borrow in this country. We have great difficulties with regard to the remittances from India, and we are pressed for an expenditure on public works in India to be provided by borrowed money to an extent which the Government of India will not be able to obtain there on reasonable terms. Now surely if anything would make one anxious about the finances of India, and watchful that no risk should be run which can be avoided, it would be such a state of things as that.

Appendix, No. 14

EXTRACT from the REPORT from the SELECT COMMITTEE on EAST INDIA (PUBLIC WORKS),
Session 1879—*continued.*

EVIDENCE of SIR THOMAS LAWRENCE SECOCOMBE, K C.S.I., C B., 20 March 1879.

Chairman.

508. I THINK there was one answer which you gave in your evidence on the last occasion, which you wished to a certain extent to qualify?—
Yes I refer to the answer to Question 482. The question was “If you put a very rigid application of a test, which we all admit is a sound and proper one, upon the expenditure which has been made upon the works, not one of them would be found to comply with the description given in the despatches?” The answer given was, “I believe that to be the case.” I would wish to modify that answer, and to say that, with very few exceptions, I believe that to be the case.

509. Or, to put it generally, those works were sanctioned in the belief that they would prove remunerative, and, with very few exceptions, they have not done so, by remunerative, I mean that they would repay the interest due on the money borrowed for their construction?—When some of the works were sanctioned the rule had not been distinctly laid down as it has been since; therefore I am unable to say that when all the works were sanctioned it was expected that they would be remunerative, it was expected that they would be remunerative in a certain degree, but not to the extent which was afterwards clearly defined by the Secretary of State, namely, that they should be remunerative in the sense of paying interest on the capital expended on their construction, including interest for the period during which they were under construction, and no revenue was derived from them.

510. But no irrigation works were sanctioned except upon the understanding that they would be remunerative?—That was the understanding.

511. But a certain number of railroads were sanctioned, because it was believed that the indirect advantages which the Government would derive from them, would justify the Government in appropriating a certain portion from the general revenues to meet the difference between the net receipts and the charges relating to them?—I believe that to be strictly correct, but at the same time I have no personal knowledge of the circumstances under which the several works were sanctioned, the matter in no way comes within the scope of the duties of the Financial Secretary. Such sanctions are given in the Public Works Department, to which a separate secretary is attached, and if the Committee are desirous of information on that point, it will be requisite to call the Public Works secretary. My duties consist in endeavouring to lay down a system which should obtain a clear form of

0 61

Chairman—continued.

account, showing what the expenditure and the income is, and also in prescribing as rigidly as possible the rules which, with a view to our financial interests, should govern the expenditure.

512. And it rests, in the administrative sense, rather with the Public Works Department to apply in the individual cases the rules which are laid down by the Finance Department?—Certainly.

513. In the latter part of your evidence you expressed a very strong conviction that it would be inexpedient, at the present moment, for the Indian Government to largely increase their liabilities in order to construct these productive public works, and you were asked whether you had any statement of the loans which have been raised during the last few years?—I have here a statement which has been compiled in the India Office with great care, but we have always had a difficulty in dealing with the different characters of the debt which has been incurred for a succession of years in India. We have applied to the Government, and are expecting a complete statement of the debt. I believe this statement to be as accurate as anything which can at present be prepared in this country.

Sir George Campbell.

514. Are there any local debts at this moment?—There are hardly any, I believe, I have understood that two or three small loans were locally raised for the construction of some small branches of railway, but of those I have never seen any record. It has been stated that there were such loans, and that the natives readily subscribed to them.

Chairman

515. You have before you a statement of debt which has been incurred during a considerable period?—I have, from the year 1837-38 down to the present time.

516. For the last six years the Indian Government have had to make great disbursements on account of famine expenditure, have they not?—They have.

517. Perhaps it would interest the Committee if you could give them a statement of the loans which have been raised from the commencement of the Bengal famine annually up to the present time?—I do not propose to give the estimated loss of revenue, unless the Committee desire it, because a large portion of that will probably be

4 Q 2

recovered,

Evidence of Sir THOMAS LAWRENCE SECCOMBE, K C & I; C.B., 20 March 1879—*continued.*

Chairman—*continued.*

recovered The famine expenditure in 1873-74, was 3,864,673 *l*, in 1874-75, it was 2,237,860 *l*; in 1875-76, the expenditure was 508,564 *l*; in 1876-77, the expenditure was 2,145,431 *l*; in 1877-78, according to the regular estimate which is the most recent advice which we have in any complete form, the expenditure was 5,231,309 *l*; and in 1878-79, according to the Budget estimate, the expenditure would be 500,000 *l*, making a total of 14,487,827 *l*

518 Will you now give the sums which were raised on loan both in England and in India for each of those years, first taking them separately?—In the first year, 1873-74, in India there was a net amount of debt paid off of 41,078 *l*; in the next year they borrowed in India 3,432,669 *l*, and in 1875-76, 2,923,022 *l*; in 1876-77, they paid off 849,855 *l*, in 1877-78, they borrowed 3,031,878 *l*, and in 1878-79, according to our most recent advices, 2,494,143 *l*

519 That is the amount borrowed in India?—Yes, in India the net borrowing during those years was 10,990,779 *l*.

520 Will you give the Committee the amount which was borrowed in England?—In England we borrowed, in 1873-74, 2,103,000 *l*, in 1874-75 we borrowed 7,479,416 *l*, in 1875-76, we borrowed 1,200,000 *l*, in 1876-77, we borrowed 5,600,000 *l*, in 1877-78, we borrowed 4,280,000 *l*; and in the present year, so far as it has gone, we have borrowed 222,084 *l*; but I ought to mention that, in the year 1874-75, of the large sum borrowed here of 7,479,416 *l*, 4,679,416 *l* was applied to redeem the dividend on the capital stock of the East India Company, by which a very large saving was effected to the Indian finances

521. Then, deducting that amount, will you tell us the total amount which was borrowed in England during the same period?—The amount borrowed was 20,886,500 *l*, and deducting the 4,679,416 *l* on account of the East India Company, the net amount was 16,307,084 *l*

522 Therefore, there has been an increase in the public debt of India of upwards of 26,000,000 *l* during the past six years?—Of 27,297,863 *l*, exclusive of the amount raised on account of the East India Company.

523 What is now the total amount of debt of the Government of India, both in England and in India?—*f.* 137,000,000.

524 And during the time to which you have been referring there has been a disbursement on account of famine expenditure of upwards of 14,000,000 *l*?—Yes.

525 The rule which the India Office have during the past year laid down, is that the money required for the construction of all Public Works Extraordinary should be borrowed in India?—It is.

526 But when a famine breaks out, such a reduction takes place in the cash balances in India, as to render it very difficult for the Indian Government to meet the drafts of the Secretary of State for India?—That is so.

527 And in consequence of that, in order to meet his liabilities, the Secretary of State for India has been forced to borrow in England?—That has been the case.

528. Therefore, in that case, the rule for not

Chairman—*continued.*

borrowing solely in India has not been adhered to, because a considerable portion of the money which has been borrowed in England has gone to the prosecution of Public Works Extraordinary?—Quite so.

529. Therefore, however stringently you may lay down the rule, that no borrowing should take place in England for Public Works Extraordinary, you would find it very difficult to carry it out in most cases, because you would either be compelled to borrow the money in England, or else to cause a cessation of those works in India? Yes, in fact, there appears to me to be but one way in which our orders could be carried into effect, and that would be, that when a large expenditure has had to be met, and when a loan has been raised in England to meet the expenditure on account of famine or otherwise in India, the first opportunity should be taken to return to the Home Treasury that amount which we, in fact, only intended to lend them. Unless that be done, when an emergency arises, calling for large expenditure there, they would not be prepared, except their cash balances were unnecessarily large, to provide for the expenditure in India, and to remit to us the money which we might require.

530 The general tendency, therefore, of famine expenditure, or any other exceptional expenditure in India, is to bring pressure upon the Secretary of State to borrow in England?—It is.

531 And when he has borrowed in England it is exceedingly difficult, considering the large annual remittances which have to be made, for the Indian Government to send any sum over and above those remittances in order to meet the loan which has been raised in England?—Yes, it is at times, and not infrequently, impracticable to remit the amount required.

532. Of the loans which are raised in India, have you any idea what proportion has been taken up by natives, and what by European firms?—Yes, I have brought a statement showing that The proportion of debt in India held by natives has recently increased. The last account that we have is to the 31st of December last, and then the amount held in India by Europeans was 29,685,391 *l*, and the amount held by natives was 14,883,083 *l*; those figures only represent so much of the debt, the notes for which had been presented for payment of interest during the half year, and applying the same proportion to notes not presented for interest, it gives an addition of 10,422,000 *l*. to the European portion, and 5,225,000 *l* to the native portion. Therefore there was held about 40,000,000 *l* by Europeans, and about 20,000,000 *l* by natives, that is a more favourable return as regards the proportion held by natives than we have had before; this return does not, of course, include the amount of enfaced paper which is in this country, and which we assume to be held by Europeans.

533 Of the more recent loans, as, for instance, the loan which was raised last year, have you any idea of the proportion in which it was taken up by Europeans and by natives, I do not wish to keep you to the exact figure, but to find out from you whether these loans are taken up to any extent by natives, or whether Europeans alone

Evidence of Sir THOMAS LAWRENCE SECCOMBE, K.C.S.I., C.B., 20 March 1879—continued.

Chairman—continued.

alone accept them?—In the year 1875 the natives took a large portion of one of the loans, and offered more liberal terms than Europeans; it has not been the case more recently, the proportion taken by natives having been less.

534 As a rule, I assume that the European firms who tender remit home the interest on those loans to England?—Obviously, if the proprietors are in England, the interest is remitted home to them.

535 But you could not state that positively to the Committee?—I could not state that.

536 Therefore you are, still strongly, I suppose, of opinion that it is expedient to borrow as much as possible in India if a loan is necessary?—I am very decidedly of that opinion.

537 And that whether the interest payable on those loans remains in India, or is remitted home to England, anyhow it is a transaction outside the cognizance of the Government, and is not to be included in the remittances which they annually have to make?—That is quite so, a loss by exchange is then incurred by the remitter on his private account, on what we remit we have to bear the loss by exchange.

538 As the demands of the Secretary of State are constant, and as the method by which he meets them is by public tendering, anything which adds to the amount he has to get from India naturally increases the difficulties of exchange?—No doubt every million added beyond a certain amount depreciates the exchange.

539 Mr. Danvers, in his evidence, called attention to a proposal which had come home from the Indian Government suggesting that the monies should be raised in certain localities or provinces on a guarantee, for the prosecution of public works. The Secretary of State did not assent to that proposal, will you give the Committee reasons for that?—The reasons were stated in the Despatch which Mr. Danvers put in.

540 The proposal was practically this, that monies should be raised by the localities or provinces, and that the Government should guarantee a rate of interest of 4 per cent. through the medium of the provincial governments?—Yes, but when we came to examine the scheme we found it to be simply this, that the securities to be given were to be exactly the same securities as those given for all the Imperial debt of India, they were to be securities of the Government of India, in the name of the Secretary of State in Council, and the Secretary of State therefore apprehended that this was to be outside the large amount which would otherwise be incurred for productive public works, and that it would also have an injurious effect upon our securities, because there would be the same security as for the Imperial debt, the interest would be 4 per cent., the rate at which we were borrowing, with the additional advantage, that the lenders would have a share in any profits which might be derived from the work for which the loan would be raised.

541 So that, practically, it was a renewal of the old guaranteed system through the agency of the local government?—Yes, and that although we should be issuing the stock at 4 per cent., it would be a preference stock, in fact, with advantages which our Imperial debt does not carry.

0 61

Chairman—continued.

542. We have had it very strongly stated in evidence that there is a considerable difficulty in India felt on the part of the various local authorities in carrying on small public works, which would not come within the category of Public Works Extraordinary, or reproductive, and Colonel Chesney, in his evidence, in answer to certain questions which I put to him, expressed a strong opinion that some body should be established in India somewhat analogous to the Public Works Loan Commissioners here. Have you considered at all the possibility of carrying out any such proposal?—Yes, it has been proposed before, not I think in any official document, but it has always been felt that the absolute control over any sums raised must remain with the Government of India, and must form part of their cash balances. What advantage therefore is to be gained by setting up anything like a board which would be competent to exercise any power in regard to the amount which should from time to time be expended on these works, I have never been able to see. A board might think it very desirable to make advances at a moment when the balances of the Government were very low, and some embarrassment might be caused to the Government thereby.

543. Therefore, inasmuch as the course from which these Commissioners, or this body, would have to advance would be the cash balances of the Government of India, you would be subject to handing over the control of any part of those cash balances to any body other than the financial department?—Quite so.

544. We have had a great deal of evidence as to the best agency by which public works can be carried on in India, and there is a complete consensus of opinion as regards irrigation works, that they must be undertaken by the Government. There has been some difference of opinion with reference to railroads, although it is admitted that the old guarantee system was somewhat extravagant, both as to the construction as well as to the working of the railroads which were made under it. An alternative proposal was suggested the other day upon which we examined Mr. Danvers, and that was whether it would be possible to raise capital on a limited guarantee from the Government, say of 2 or 3 per cent., the company having a certain portion or the whole of any profit over and above that amount which might arise upon the work which they had constructed, have you ever considered the feasibility of such a plan?—Yes, that plan has been considered, and it has its advocates, but I do not see what is to be gained by such a system. If you give a pecuniary interest to managers of a railway, that is that they shall derive a considerable profit if it be economically constructed and worked, I have no doubt that is a great inducement to them to work economically, but I am unable to see why a railway should not be as well worked by Government officers, assuming they are sufficiently paid, as by directors of a company, who frequently represent little other than their own interests. I noticed from the replies of Mr. Danvers that after the first appointment of railway directors, they appear to nominate their successors, and a question being put whether, as in the case of the London and

4 Q 3

South

Evidence of SIR THOMAS LAWRENCE SECOOMBE, K C S I, C B., 20 March 1879—*continued.*

Chairman—continued

South Eastern Railway Company in this country recently, there was any canvassing among the shareholders for seats at the board, his answer was, No; and he admitted that practically there was none of that independence which exists among the shareholders of English railways. But this is a question upon which I have had no opportunity of forming any decided opinion.

545. Then I think you would not approve of any scheme by which the money would be borrowed in England, and the dividend paid in England?—I think it would be a great mistake.

546. Would you object to an attempt to carry out that scheme in India, by giving the local governments all the localities, or certain constituted bodies, a guaranteed interest upon the capital which they might raise for the construction of the works, assuming of course that the guarantee given was below the rate at which the Government of India could raise money?—If the interest guaranteed were much below that at which we were borrowing, it would not prejudice our own debt as it would if it were of the same amount with a prospect of advantage.

547. But, speaking generally, you are not at present in favour of giving any companies who may wish to raise capital, any security other than the revenue or income which they may derive from the work constructed?—If you could induce natives to subscribe for the construction of a railway, and if you could be sure that the natives represented themselves, and were not mere instruments for other persons, such as English capitalists, I think it would be very desirable to grant the natives liberal terms for any money which they might be disposed to expend, but unless you can do that, I think it has not been shown why it would be preferable to give a guarantee rather than to construct railways upon the principle of the State railways.

548. In the forms of accounts which were prepared by Colonel Dickens, a separation was made of the debt which has been incurred for Public Works Extraordinary, from the general debt of the Government of India; what would you do with the surplus on the ordinary account, would you apply it to the reduction of debt, or would you allow it to go in the cash balances?—The paying off a portion of debt while you continue to borrow, appears to me to be a proceeding which has no advantage attending it, and is disadvantageous, because you appear to be borrowers to a larger extent than you require.

549. But will not this difficulty arise, unless you lay down some such rule; I will assume there is a surplus, say, in the present financial year, upon the ordinary account; that surplus, in the ordinary course of events, would go into the cash balances, and be at the disposal of the Indian Government for the in-coming financial year; it would be necessary to borrow a certain amount to carry on the Public Works Extraordinary; would it not be simpler to apply this surplus to the reduction of the debt other than that for Public Works Extraordinary, and then to borrow the whole amount from the public which you would require for the construction of public works, and add that on to the Public Works Productive Debt?—If there were such a demand for our bills that any such surplus could be remitted to this

Chairman—continued.

country towards repaying the amount which we had raised here, that would be the wisest mode of applying it; if there be no such opportunity, then I think the only wise plan is, having taken care that your balance is sufficiently large, to allow the remainder to go in reduction of that amount which you would otherwise borrow.

550. But that is a matter of account, what would you do with this surplus; according to this account, all the money which is expended on a certain class of work is treated as borrowed money?—Quite so.

551. If you have a surplus on the ordinary account of the preceding year, that surplus would in England be applied to the reduction of the debt, but it goes into the cash balances in India. Now what are you to do with that surplus, if you do not apply it to the reduction of debt?—I would assume that we expend in a year 2,500,000*l* upon productive public works, any amount that was obtained from the cash balances would be treated as transferred to debt incurred for productive public works, so that in fact we should treat it as debt paid off for ordinary account, and incurred for productive public works.

552. Then, in fact, you would treat whatever sum came out of the cash balances as debt paid off from ordinary account, and transferred to the Public Works Extraordinary?—Yes.

553. Then to sum up your evidence, you would adhere to the rules which have been laid down, that only works of a productive or remunerative character should henceforth be constructed with borrowed money; that the amount so annually expended should be brought down to 2,500,000*l*, and that the most accurate account of all such expenditure should be given, in order that everybody may see what the exact results are, not only as regards the general expenditure upon these works, but also as regards each individual work?—I would, and with regard to that, I would like, with your permission, to read an observation of the Government of India in a Despatch dated in 1876, regarding the serious position in which we were placed by the fall in the price of silver. That Despatch strongly advocated the plan of limiting the expenditure on public works.

554. In fact, it expresses your views, only emanating from India?—It does, only more strongly than I have expressed them. The Government of India said, "We have also, in accordance with your Lordship's repeated instructions, resolved to reduce our expenditure upon public works classified as Extraordinary within the limit of the amount which we may find ourselves able to borrow in India on adequately advantageous terms. What this amount may be, experience only can decide, but we cannot prudently estimate it, even at the outset, at more than 2 or 2½ crores of rupees a year, and for a permanency, it may prove to be even less than this sum."

555. What is the date of that Despatch?—The 13th of October 1876.

Mr. Childers.

556. I think you stated that, in dealing with the debt, you would not divide it physically into two

Evidence of Sir THOMAS LAWRENCE SECCOMBÉ, K.C.S.I., C.B., 20 March 1879—continued.

Mr. Chalders—continued.

two debts, one for general purposes, and the other for remunerative public works; but where you have a balance on your account which could be applied to the reduction of the liabilities of India, you would only make a book entry, crediting the general account and debiting the works account?—Yes, that would be on the balance-sheet; there would be no distinction in the books other than that.

557 You would deprecate any raising of debt with one hand and paying it off with the other?—I think it would be unwise to do so.

558 You would deprecate the keeping of two classes of accounts, although you would advise making two entries in the books to show what was raised for remunerative purposes and what was applied to general accounts?—Quite so.

559. Passing to the question of the limited guarantee, did I understand you to say that, even if a company could be found to construct a railway from one point to another, which the Government deemed advantageous, without any guarantee at all, you would not like to see that railway constructed with English money?—No, I did not say that.

560 Will you be kind enough to explain your answer, because the purport of your answer went to that?—Until the Government is called upon to give a guarantee, it is in my opinion very desirable that English capital should be invested in India.

561 So far, therefore, as the exchanges are concerned, and the question of the amount of money which is to be remitted from India bodily to England, putting the distinction between commercial money and Government money out of sight, you see no disadvantage, but, on the contrary, great advantage, in as much English money as possible being invested in India?—Yes, I think that the advantages greatly outweigh any disadvantages which may arise from the annual remittances on all accounts to this country being increased.

562 Although the effects upon the Council drafts would be the same?—I do not think that the effects would be quite the same. I think private individuals' remittances are not so conspicuously exhibited to the public as Council drafts, we advertise every week for a very large amount of bills, and the public attention is given directly to those bills. I am quite aware that the balance of trade must greatly affect the question, and the rate of exchange at which the remittances are effected; but I believe the effect upon the exchanges of remitting 5,000,000 £ through private channels is very much less than of adding 5,000,000 £ to our drawings.

563 Then you consider that the rate of exchange does not depend upon the difference between the imports and exports, but upon the publicity which is given to the amount of the remittance?—No, I do not go so far as that; certainly the exchange is in a great degree dependent on the balance between imports and exports, and it is dependent also on the price of silver, which does not necessarily follow the Indian demand, but I certainly do not think that our Council drafts exercise such a very decided influence as you infer from my reply.

564 Have you formed, in your own mind, any

0 61

Mr. Chalders—continued.

estimate as to the difference which is produced upon the rate of exchange by the amount of the drafts being known only to bankers as they always are, or being known to the bankers, plus the public, which is the case with respect to Council drafts?—I am quite unable to form an estimate of the difference; I believe the difference to exist, but I could not say what it is.

565 Do you think it would be one-eighth per cent.?—I do not know, but I think that in times of great pressure the difference is more marked than it is when the pressure is not very great.

566. Therefore you do attribute some effect to the publicity, but you cannot measure even by one-eighth per cent the amount of that effect?—No, I cannot. There is another consideration which weighs very much in the mind of the Financial Secretary in the India Office, and that is that the individual bears the loss in the one case, whereas in the other it falls upon the Government, the rate is affected by the aggregate, the charge to India depends on the amount we draw.

567 Then we may take it that if individuals combine to construct railways in India, with their own English capital, without asking for any Indian guarantee, you would rejoice to see railways constructed in that way?—Certainly.

568 Where then is the point where the Government comes in if the amount of the guarantee is practically so small as to be sure to be earned by the company; if, for instance, the guarantee is only 3 per cent, and it is practically certain that a company would only accept a 3 per cent. guarantee on the just expectation of reaching 6 per cent, and therefore would not come upon the Government at all, where does the influence upon the Government drafts begin?—That is a point on which I am unable to give any definite opinion. You will remember that in regard to the natives I should certainly be disposed to give them a guarantee.

569 I am speaking now solely of English money invested in India with a small guarantee, and I ask, if that guarantee is so low that practically the aid of the Government could not be invoked, how would that affect the exchange of Council drafts?—I have not intentionally given any opinion with regard to any effect upon Council drafts from such a course of proceeding as the construction of a railway with English capital. My objection in regard to giving a guarantee is that the Government should not make itself liable for securities which would carry with them a guarantee, plus a share of profit, and which would come favourably into contact with our own registered debt.

570 But if that is so, I do not quite see what the advantage would be in works of that kind being constructed with Indian money rather than with English money?—There is an advantage, a great political advantage, as I consider.

571. But I was asking you as a financial officer?—But in all these financial transactions we have always kept before us the fact that there is a great political element in getting the natives of India to invest their money.

572. The additional taxation of last year was proposed in order to produce altogether 1,500,000 £ a year to form a famine fund?—That was so.

4 Q 4

573. The

Evidence of Sir THOMAS LAWRENCE SECOCMBE, K C S I., C B., 20 March 1879—continued

Mr Childers—continued.

573 The famine fund was so formed because it was estimated that a sum of 15,000,000 *l.* would probably be expended upon famine purposes in 10 years?—Yes.

574 And if is the case, is it not, that the Finance Minister in India, in making that proposal, put it in this way 'we may expect that within the next 10 years, judging from the past, we may have to expend 15,000,000 *l.*, to produce which, 1,500,000 *l.* a year should be taken from the revenue of India, and invested in reproductive works; and then when the call comes upon us we shall be able to charge that fund as it were upon the special famine expenditure; was not that the basis of the transaction?—I think it was not quite to that effect, different views were given at different times with regard to the famine fund. Sometimes it was to be invested in paying off debt which could then be incurred again; and undoubtedly if that had been English debt, that was the most certain way of securing a famine fund when a similar emergency arose; but if, instead of being applied to paying off the English debt which had been incurred in order to meet the expenditure of the famine, 1,500,000 *l.* a year was expended in India on public works, or in preventing a larger sum being borrowed than would otherwise have been necessary, then certainly it would not be available when an emergency arises again, and the Government of India would have to come to the Home Government for relief.

575 But is not that exactly what Sir John Strachey clearly states in his great speech upon the subject, namely, that the 1,500,000 *l.* was to accumulate from year to year, not in the sense of being actually invested in works, but in the sense of diminishing the amount of debt raised, so that when the emergency came that diminution would be balanced by the special debt which had to be incurred?—Yes, somewhat in that form.

576 The form of the Government of India, that is the form in which they came to us, is it not?—They have admitted the general principle, that when they are aided by the Home Treasury in times of pressure, it is right that they should repay a portion of the debt so incurred.

577. But I want you not to complicate the matter with these two methods, because that might a little lead us astray. The principle is that there shall be funded 1,500,000 *l.* a year raised by special taxation, so as to be available for certain preventive or other works, upon emergency, to meet special famine charges?—Yes, a portion was to be so applied, that when another emergency arose it should be available; but then it is very important to bear in mind that it would not be available if expended on public works.

578 Instead of being expended on public works when it would not be available, it was to go in reduction of the expenditure on public works, and then the money could be raised when required?—Yes, and the reasoning would be sound if the Government of India were able, when an emergency arose, to provide for it in India.

579. You raise a fund out of this 1,500,000 *l.* a year which is supposed to be invested in that way, and that is mentally available, if one may

Mr. Childers—continued.

use the expression, for a special emergency for which the additional taxation was justified?—Yes; but it must be remembered that the Secretary of State has expressly directed that one-half of that famine fund is to be annually remitted to this country to recoup the Home Treasury for these advances, which were made during the famine.

580 That is the point I see in your evidence, and I want quite to understand it. So far as Sir John Strachey's speech and the justification of the additional taxation goes, as I read it, the fund commenced last year, and was to be balanced by the probable expenditure of 10 years to come, but in the later Despatch which you gave us the other day, and which has just been printed, it would appear that half the fund is to be applicable to past famine expenditure, so that half the additional taxation is not to build up a security against the future, but to provide for the past, the question I want quite to understand upon that is this, to what extent is that half supposed to be chargeable, for how many years is 750,000 *l.* a year to be paid to recoup past famine expenditure?—The Secretary of State having obtained authority from Parliament to raise money in this country on account of famine, and having borrowed that money, and relieved the Government of India of its expenditure, when additional taxation is placed on the people of India in order to form a famine fund, I consider that it is our duty to see that that famine fund should be really available, and if a million and a-half is the probable annual charge which may be anticipated on account of famine, that the very least we should require to be sent to this country is half of that amount, in order that it may accumulate here and be available whenever another emergency shall arise.

581. I quite understand that, but that is not an answer, if you will forgive me for saying so, to my question. In the Despatch it is quite plain, it is for the repayment of debt already incurred in famines, that is to say, to recoup past famine expenditure, that half of this additional expenditure is to be applied, but I ask you how long is that to go on?—Continuously. The liability to expenditure on account of famine is estimated at one and a-half millions a year, taking an average of 10 years.

582. That is not quite the point, the one and a-half millions a year was primarily to be applied to relief from famine, whether in the shape of preventive works or in the shape of other relief expenditure. According to the Despatch, paragraph 18, the first claim upon the receipts is not for building up a fund for the future, but to repay the past famine expenditure, and the Secretary of State lays down that half the amount, 750,000 *l.* a year, is to be applied to repay past famine expenditure. My question is this. Up to what amount in the aggregate is that 750,000 *l.* a year to be applied to expenditure in the past, supposing there were no future expenditure?—Until the Secretary of State is repaid the amount which he borrowed in England for the relief of recent famines.

583. How much is that?—Since the year 1873-74 we have been borrowing continuously, and

Evidence of Sir THOMAS LAWRENCE SECCOMBE, K.C.S.I., C.B., 20 March 1879—continued

Mr Childers—continued

and a great portion of the money borrowed has been on account of the famines

584 But I want to get the figure. Here is a first charge upon the 1,500,000 *l* a year: 1,500,000 *l* a year is to be applied to the extent of 750,000 *l* of it a year to recoup the expenditure in the past. How much expenditure in the past must be so recouped, and when will that payment cease?—It will only be recouped when the amount of which we have relieved the Government of India on account of their famine expenditure shall have been repaid.

585 But how much is that?—The famine expenditure during the last six years has exceeded 14,000,000 *l*. The whole of that amount has been furnished from the Home Treasury, and it is, I think, essential for us to show that Parliament having been informed that no money shall be borrowed in England for Public Works Extraordinary, we have borrowed 14,000,000 *l* for famine purposes.

586 If that is so, may we understand that of the 1,500,000 *l* a year specially imposed for famine purposes, 750,000 *l* has been imposed to recoup for something less than 20 years the 14,000,000 *l* raised for famine purposes in England?—I think it would be hardly fair so to put it. The reasons for the imposition were given by the Government of India, and by Sir John Strachey, and I think you will find that their reasons comprehended the reduction of debt to a greater extent than was implied in your former question.

587 I hope you will forgive my persistency; it is a point upon which we should be quite clear, I am asking you upon the 18th paragraph of the Despatch, which says that "the first claim upon these receipts being that of the Home Government, for the repayment of the debts incurred on account of famine, not less than one-half, 750,000 *l*, should be available in these future years." My question is for what number of years, and for what total amount will that 750,000 *l* be so payable, until the debt already incurred is wiped out?—It will be until the amount which was borrowed under the authority of Parliament for famine purposes shall have been recouped.

588 You have told the Committee that that would be about 14,000,000 *l*?—Yes.

589 That is to say, it would take 18 or 19 years before that amount was wiped off?—It would

Sir Joseph M'Kenna.

590. Does not the 14,000,000 *l* carry interest?—Yes, the 14,000,000 *l* we borrowed in England carries interest undoubtedly, but I apprehend that that would not be required by the Secretary of State in addition; he would be content with getting the principal

Mr. Childers

591 So far as this arrangement goes, which is described in the 18th paragraph, the Home Government do not want to be recouped out of the famine fund, but they do expect that, roughly speaking, 14,000,000 *l* shall be repaid?—It has never been stated in any Despatch what the total amount shall be. The principle was laid down

0.61.

Mr Childers—continued

that towards the repayment of the sum borrowed three quarters of a million should be annually held available.

592 At any rate, until that is repaid the whole amount available for future protective works, or for future ordinary famine expenditure, will only be 750,000 *l* a year?—That will be so until a portion of the amount is repaid.

593 And according to this Despatch also, if I understand it rightly, no loans are to be raised for protective works?—That is so

594. And if any protective works are constructed, they must be constructed out of the difference between 750,000 *l* a year and the ordinary famine expenditure?—Yes.

595 So that, under this arrangement, the Government of India have finally decided not to borrow money for any protective works against famine whatever, but to limit the expenditure upon protective works to the difference between 750,000 *l* a year and the ordinary famine expenditure?—Yes. I ought at the same time to mention that we were informed, indirectly, that the utmost amount which could be expended advantageously in the next five years, on protective works, would be 6,000,000 *l*.

596 But, in the next five years, if you only have 750,000 *l* for protective works, and so on, you will not get anything like 6,000,000 *l*?—If a famine should again arise, whatever amount the Secretary of State has been recouped would be applicable to meet the expenditure

597 But that would not be in the shape of protective works?—No, it would not be in the shape of protective works

598 My question is this as you have only for six years 750,000 *l* a year applicable, and as that only makes 4,500,000 *l*, you will not be able to apply anything like 6,000,000 *l*. to protective works, but only the difference between 4,500,000 *l*. and whatever is taken for ordinary famine expenditure?—That would be from the Indian portion of the fund

599 But the English portion is already mortgaged for 18 years for the past famine expenditure?—No, it would be a fund which would be available again if a famine should arise.

600 But it is mortgaged for 18 years, as I put it, for the expenditure which has been incurred during the past?—Yes, but any sum repaid would be again available.

Sir George Campbell.

601. Supposing that, under any circumstances, this past famine debt incurred by the Government of this country should be repaid, is it not quite possible that it might be desirable to continue to remit this sum to accumulate at credit on account of famine, for in case famine should subsequently break out, it would be impossible to borrow the whole amount in India; you would have to borrow it in England?—I think it would be the wisest possible course to continue that remittance to keep down the Home debt.

602 So that, in your view, that remittance should not be limited to the time when the amount advanced should be repaid, but should be a continuous remittance?—The annual remittance was based upon the average amount that would be continuously required, and therefore

4 R

the

Evidence of Sir THOMAS LAWRENCE SECCOMBE, K C B L, C B., 20 March 1879—continued

Sir George Campbell—continued

the 750,000 l. will be required permanently. I have a statement showing the surplus or deficit in each year from 1873-74, the two most recent years being estimated only, the amount expended upon productive public works, and the net amount borrowed in England and India. The net amount expended upon productive works in India during that period has been 25,341,000 l., and of that amount less than 11,000,000 l. was borrowed in India, therefore the amount borrowed in India was 14,000,000 l. less than the amount which they expended on productive public works in the six years.

Mr Childers

603 Then we may take it that until that 14,000,000 l. is recovered the 750,000 l. out of the 1,500,000 l. would be applicable to past expenditure?—Certainly.

Sir George Campbell

604. I understand you to say that the works which are now classed as reproduction are works which are expected to pay from a commercial point of view, that they were such works as a private capitalist investing his money would consider to be remunerative to him, is that so?—That is to say, that no new work which will not fulfil those conditions is to be undertaken from the date of the receipt of the Secretary of State's Despatch

605. Then, would you not consider that works not directly remunerative from a commercial point of view, but which might be remunerative in the sense of increasing the productive wealth of the country, would come within the limit of the works which are to be met from this Public Works Extraordinary Loan?—Certainly not.

606. Is it not the case that the Government have desired to adopt a form of account of such a character that in regard to works both separately and in the aggregate, it should be made clear whether they are or are not productive in the sense I have just put to you?—It is.

607. Is it your opinion that the Government have yet succeeded in devising any such form of account?—Yes, with one exception, that it does not include the interest while the works are under construction. I think that, with that exception, the account which has been placed before the Committee, the form of which was prepared in the India Office, will answer the purpose

608. Is not that omission of the interest upon works under construction a very important omission?—Certainly.

609. Is it not the case that a capitalist considering whether an undertaking would be remunerative or not, would certainly take into consideration interest during construction?—Certainly, it would be added to the capital.

610. Is it not the case that many of these works have been long under construction and not remunerative, and that in their case the accumulated interest comes to a very large sum indeed?—No doubt.

611. Is it not the case that an account of that accumulated interest exists, and that up to a comparatively recent period it was included in the accounts which were made up by public authority?—In the accounts for the year 1875-76

Sir George Campbell—continued.

such a statement was included, but it was a very imperfect one

612. Do you think it would be difficult to compile such an account with approximate accuracy?—It would be a work of some labour, which of course should be given to it, the object is sufficiently important to justify the employment of much time upon it, and it could then be put in as an approximate statement

613. Is there, in your opinion, sufficient ground for the course which is taken of omitting interest, during construction, from the accounts submitted to Parliament?—I regret that it was omitted. As that form was first prepared in the India Office, it did include a column for the interest, but it was struck out, partly because it was felt that at the present time the account was sufficiently complicated without it, and it was thought that it would be better to give it in its present form

614. Was it at the instance of the Public Works Department that the column for interest was struck out?—It was at the instance of a gentleman who took part in the preparation of the form of account

615. Was the gentleman you alluded to connected with the Public Works Department?—He had been

616. Is it not the case that, in regard to such a work as the Ganges Canal, this question of interest is so large that the inclusion of the interest would almost diminish by one-half the amount of profit which is now received from that canal?—Probably it would.

617. There is another question which I should like to ask you in connection with this account. Have you considered and formed an opinion whether, taking the definition of a productive work, upon which, I think, you and I are agreed, it is right to include in the accounts what are called the indirect profits of those works, that is to say, the profits not directly received, but the profits which are calculated to be received indirectly in the shape of an addition to the revenues of the country?—It certainly is very important to ascertain, if it be practicable, what proportion of indirect revenue is attributable to the works; otherwise their commercial character cannot be clearly seen.

618. Then with regard to that I must put two questions to you. First, whether it is practicable to ascertain the amount of that indirect benefit, and secondly, if it is ascertained, however desirable it may be to have this information, whether treating the works as commercially reproductive, the amount may fairly be included. Now, first as regards the practicability of ascertaining this amount; you are probably aware that in the country through which the Ganges Canal runs, lines of railway have also been constructed during the same period of time. Do you see any means by which it is possible to distinguish between the difference in the resources of the country made by that canal and by the railway running alongside of that canal?—No doubt it would be exceedingly difficult to make any such distinction, but if the Revenue and Public Works officers were to agree, I think we might reasonably accept their decision as an approximate one

619. But speaking as a financier, is it not the case that, after all, this must be a matter of opinion,

Evidence of Sir THOMAS LAWRENCE SECOCOMBE, K.C. S.I., C.B., 20 March 1879—continued

Sir George Campbell—continued.

opinion, and not a matter of exact calculation?—Certainly; it would be idle to suppose that we could obtain an exact account showing how far past works have been remunerative or otherwise.

620. Then while you are unable exactly to apportion the amount of indirect benefit, would it be right to include that indirect revenue, inasmuch as the capitalist would not be expected to derive that profit?—I should not take so rigid a view as that.

621. I think you have already expressed your opinion that the works constructed by natives before the British rule, in respect of which only a moderate expenditure has been incurred by the British Treasury, are not fairly classed with the productive works which have been made entirely by British money?—They ought not to be classed together, unless you can fairly assess the value of the works that we succeeded to.

622. Is it the fact that under the head of Reproductive Works, only railways and irrigation works are now included?—Yes, that is so now. Bombay Special Fund Works were included in the years from 1867-68 to 1869-70.

623. Will you explain to the Committee under what head is now classed the expenditure upon such works as the Madras Harbour, the Bombay Shore, the Bombay Docks, the Hooghly Bridge, advances to municipalities, and other matters of that kind upon which a large expenditure has been incurred?—Advances to municipalities are shown in the accounts under that head. The advances for the Madras Harbour Works were, in the last accounts, included among advances repayable.

624. What I want to know is, whether when the accounts of the Revenue and Expenditure of India are presented to Parliament, these expenditures, which I have mentioned to you, are treated as expenditure for the year under any head whatever?—No, the interest which we obtain from the advances is included in our annual account.

625. But none of them are included as expenditure either under the ordinary or the extraordinary head of the Indian Government accounts?—No.

626. Does not that lead you to this, that while we are told that we are only borrowing for two particular classes of works called productive, we are really borrowing for large classes of works to which there is really no limit whatever?—I think in your evidence, given before this Committee, if I remember rightly, you informed them that, in regard to these works, they were constructed from advances made by the Government to municipalities, and you also mentioned what I was not previously aware of, namely, that a sinking fund was provided to repay the sums.

627. But what I want to know is your opinion as a financier, whether if we are to have any check over the borrowing powers of the Government of India, if we are to limit those borrowing powers to particular works and particular amounts, this system of making advances for other works which are not included in the accounts of expenditure, does not open the door to unlimited expenditure?—It is open to the Secretary of State, or to Parliament, if they find

0 61

Sir George Campbell—continued.

that the advances to those municipalities are increasing very largely year by year, to call upon them to restrict, or to discontinue those advances, but it would be quite erroneous to include in the account of the Government of India, the expenditure which is incurred by municipalities from advances made by the Government on which the municipalities pay interest, and for repayment of the principal of which a sinking fund is provided.

628. But as a matter of fact, do not these advances increase the amount which it is necessary the Government of India should borrow from year to year?—Yes.

629. And therefore is there not a certain fallacy in the accounts presented to Parliament, which seem to show that the Government of India has only borrowed, say, 5,000,000 £ for public works, when it may be that in this indirect manner not only in the shape of municipal advances, but advances to local governments, 10,000,000 £ may have been expended?—The accounts of the Government of India show clearly what the total debt has been which they have incurred on all accounts.

630. Do not you think it would be desirable that this particular head of money borrowed in order to make advances for works by local governments or municipalities, should be put under a separate head?—The account of the advances made to them, when compared with the general account, shows whether the advances have been made from borrowed money.

631. But is there any head which distinguishes advances for public works from advances for any other purpose?—No; when the Government of India borrows, it borrows generally in the form of one loan during the year, and that is for all its necessary requirements.

632. Would it not be desirable to know how much has been borrowed for the purpose of public works, and how much has been expended for the purpose of public works?—During the year, no doubt, such an account could be added if it were thought desirable.

633. Is not the present rule liable to this abuse, supposing the Government of India to construct expensive works, costing, say, 2,000,000 £, and the Government of India say we cannot do this; the orders of the Home Government are strict that we may only construct certain public works from borrowed money, and those must be productive works, either railways or canals, whereas this proposed work of yours does not come under this head, and we cannot consent to construct it with borrowed money. Might not this rule of the Home Government be circumvented, as it were, if the Government of Madras were to return to the charge, and say, we will not ask you to construct these works, but we will ask you to lend us a couple of millions for the purpose of constructing them?—Any such proposition would be reported to the Home Government, and it would rest with them to decide whether the reasons given for it were sufficient.

634. Is there any rule as regards advances for public works, and the amount which may be advanced without the sanction of the Home Government?

4 R 2

Evidence of Sir THOMAS LAWRENCE SECOCMBE, K C S I, C B, 20 March 1879—continued

Sir George Campbell—continued.

Government?—No, sanction was given by the Secretary of State to the Act of the Legislative Council of India, which provided for those advances, and that being done no further sanction is absolutely necessary on the part of the Secretary of State, but in the event of such a proposition as you refer to, namely, of two millions being required in that way, I can hardly imagine that the Government of India would not report it, even if it were not reported it would attract attention when the head of "Advances" was examined.

635. Supposing the Home Government of India were extravagant, and inclined to go beyond their rules, such a thing as I have suggested might be possible?—No doubt it might be so.

636. In any case it cannot be said that money is borrowed only for two classes of public works; in fact, through the system of advances, money is borrowed for other classes of public works, is it not?—Money is borrowed to be advanced to municipalities, but not for any other public works constructed by the Government itself, except railways or irrigation works.

637. Or to be advanced to local governments, are you aware that at one time the cash balances of the Government of India were so large that they were inclined to advance to municipalities in order to get rid of their cash balances?—The cash balances were very large some years ago, undoubtedly.

638. May it not happen, on the other hand, that the cash balances may be depleted to an inconvenient degree by a practice of this kind?—It is possible, if we assume great want of judgment on the part of the Government of India.

639. I understand you to have stated that, in your opinion, most of the great public works undertaken in the last 30 or 40 years have not been productive in the sense of being commercially remunerative?—I have.

640. You think that that is especially so as regards irrigation works?—With certain exceptions.

641. Then with regard to railways; if in the case of the great lines of guaranteed railways interest during the construction is taken into account, do you think that the principal and the best of those railways may be now taken to be commercially remunerative?—I have had no opportunity of forming an opinion upon that point beyond that which the papers, which are received and which are regarded as accurate in the office, have afforded me, it certainly appears that some of the railways are now commercially remunerative.

642. Is it not the case that of late years the East India Railway has been commercially remunerative?—It now appears to be commercially remunerative, and may be expected to continue so.

643. In round terms you are not prepared to dissent from the general opinion that the principal railways are likely to be commercially prosperous?—I think they are, but it would be presumptuous for me to give a very decided opinion on that point.

644. Have you any information with reference

Sir George Campbell—continued

to the class of works upon which the Extraordinary Loans of the past three or four years have been expended?—No other than that which is apparent in the finance accounts.

645. Then am I to understand that the Financial Department exercises no check over this expenditure with the view of seeing that the financial rules and safeguards limiting the character of these works are observed?—The Financial Department of the India Office does not. The administrative portion of the work relating to railways is in the Public Works Department. The proposed Despatches which sanction any of the undertakings when they have passed the Public Works Committee, are referred to the Finance Committee, and are there considered previously to being placed before the Council, but the Financial Department has no control over the works.

646. In what Department was the Despatch issued in which the Government of India were required to construct no works from borrowed money beyond certain limits?—That was in the Financial Department.

647. Do not you think that there is some necessity for ascertaining that the Financial Department have had their own orders complied with?—Yes, when we have obtained the accounts in a complete form it will be easy to see whether the orders have been observed, but until we get those accounts, it is not practicable.

648. Am I to understand that up to the present time, as regards the faithful execution of those orders, there has been no control in the Financial Department of the India Office?—Up to the present time it has been more a matter of discussion as to the principle to be observed, than whether it had been carried out or not.

649. Up to the present time the expenditure has been between four and five millions in each year, and the Financial Department has exercised no check to ascertain whether the works upon which the money has been so expended are really within the compass of the Financial Despatch or not?—No.

650. Now am I to understand you to say that even if you were quite assured that the works which the Government of India might undertake to a large extent, say to the amount of 10,000,000 l. or 12,000,000 l. per annum would be profitable, you would be against borrowing money to carry out such profitable works?—That question implies a state of things very different from that which exists, the sound principle, as I believe, which should govern the undertaking of these works is, that the money should be raised in India; consequently the amount which can be raised there is the limit as to the money to be obtained for constructing the works; I believe you could not safely assume that more than two millions and a half annually could be borrowed in India on reasonable terms, and therefore it would be exceedingly unwise to authorise them to construct works to a larger amount, as it would inevitably fall upon the Home Government to supply what might be deficient.

651. Then I would ask you whether it has occurred to you to consider this view, which I think has been often presented to the public,

that

Evidence of Sir THOMAS LAWRENCE SECCOMBE, K.C.S.I., C.B., 20 March 1879—continued

Sir George Campbell—continued.

that is to say, seeing that our own colonies and almost every other country in the world receive very free supplies of British capital, why under those circumstances would you prevent India from receiving a similar supply of capital from this country?—India has received an immense amount of English capital within the last 30 years, and like the case of an individual improving his estate, there might be many things which would pay him very well to have done; many improvements might be made, but he would have to obtain the money for the purpose of executing them at too high a cost. Indian credit has stood very high for many years, and it has been second only to that of the British Government. A change, however, has now occurred, and I think, unless great care be taken with reference to increasing the amount of Indian securities in India as well as in England, you will find that the rate of interest for money borrowed will be such, that it would be very unadvisable to construct public works under the expectation that they will be commercially remunerative.

652. Can you at all explain why it is in your view that private investors seem to have been so ready to invest their money all over the world, rather than in India, why it is that there is scarcely a bankrupt State in either hemisphere in which our private investors have not advanced their money almost to a lavish degree, and yet at the same time there seems to have been an extraordinary disinclination to undertake enterprise in India without a Government guarantee?—The temptations which India has afforded have not been so great in the eyes of the British public as those which have been afforded in other directions. As I said before, a very large amount of British capital has been invested, nearly 100,000,000 *l.*, in Indian railways under a guarantee, and the public have lent very freely to the Indian Government. You can only get the market to take a certain amount of Indian securities, and many of those countries to which you refer have held out higher rates of interest and greater inducements.

653. But still, do you not think there is something extraordinary in the degree to which, as I have said, British money has been lavished in almost every bankrupt country in the world, and yet, without a Government guarantee, has not been expended in India? Is it not to some extent the case that our capitalists have been in a measure debauched, if I may use the term, by Government guarantees, that they will not advance the money without a Government guarantee, whereas if they had been left to themselves to some extent as they have been in other countries, seeing that they have in India British Government, British security, and British management, if circumstances such as these to which I allude have not had their effect upon the market, we might reasonably expect that more money would have been invested in India, without the intervention of Government?—Until recently Indian railways have not paid more than the amount of the guarantee, and some of them have not yet done so. The securities of the Government of India have of late years only yielded 4 per cent., and that has not been a sufficient attraction to the public.

O 61.

Sir George Campbell—continued.

654. Then I understand you to have given as a reason for not increasing the amount of money owed by India to England, not only the ordinary financial and political reasons, but also the bad effect which is produced on the rate of exchange by the necessity of remitting excessive amounts. Now what I wish to ask you is, in order to ascertain whether the rate of exchange is really very adversely affected by those circumstances, first, what is the intrinsic value of the rupee in sterling at this time, when silver is about 49 pence per ounce?—Without pretending to be strictly accurate, about 1 *s* 6 *d*.

655. Then is it the case that the exchange at this moment is less favourable than what I might call the natural rate of exchange, taking the natural rate of exchange to be the relative intrinsic value of the sovereign and the rupee?—One element in considering when the exchange is too low is, what the out-turn of a bullion remittance from India would be. You would not then obtain for it the full value of the silver, because it would be subject to 1 or 1½ per cent. for transmission and insurance.

656. But still, am I to understand that when the Secretary of State now draws upon India, he receives the full intrinsic value of the silver contained in the rupee?—Yes; as the rule, something better.

657. Then as a matter of fact, the exchange is not less favourable than what I have called the natural rate, but is still somewhat more favourable than the natural rate?—It is hardly right to call it the “natural rate” according to the price of silver at any moment. The natural rate would be the price of silver, taking the average for several years, and that would be considerably above the present rate.

658. Am I to understand that, taking the average of several years, it will generally be found that the Secretary of State, in drawing upon India, has received less than the intrinsic value of the rupee at the time when the draft was made?—No, as the rule, rather more, because you cannot place a rupee in India, without adding to the value of the silver which it contains, the cost of freight and insurance on its transmission to India plus 2 per cent. for coinage.

659. Then I am to understand from what you say that, putting aside the intrinsic value of the two metals, the state of the import and export trade of India is rather favourable to the party drawing on India than otherwise?—Favourable, if you take the price of silver in the rupee, and not otherwise.

660. Putting the matter in the other way, does a man who draws a bill in India upon England get the full value of the rupee in England, or does he get less?—He gets the value of the rupee in England.

661. But does he get an amount of silver equal to the intrinsic value of the rupee?—Yes, as a rule.

662. I understand, for the reasons which you have given, that the policy of the Government for some years has been, and now very strongly is, to borrow in India rather than in England?—It has.

663. And you think that prudence would dictate that the amount expended on public works should

Evidence of Sir THOMAS LAWRENCE SECOMBE, K.C. S.R., C.B., 20 March 1879—continued.

Sir George Campbell—continued.

should be limited to the amount which can be borrowed in India, and you have stated that you think the amount must be limited to 2,000,000 *l.* or 2,500,000 *l.* sterling per annum. Now, I will ask, do you think we have fairly tried what we can really raise in India, that we have tried by the best methods, and to the utmost, to raise loans in India?—It has very often been thought that a great end would be attained if we could induce the natives of India to lend from their hoards what capital they may possess; that we should thereby not only obtain a considerable amount of money, but we should add to their comforts, and we should also accomplish a great political object, and I know, from conversation with yourself and with many other distinguished servants of the Indian Government, that they have been fully alive to the importance of the subject in that direction; but any proposition must, I think, come from India, it could not be suggested as well from this side, except by means of personal communication. No scheme has yet been proposed which would be likely to accomplish the great object in view.

664. The point at which I am aiming is this: I think you are aware that there is a very radical difference between the mode of borrowing in England and the mode of borrowing in France; that in England the habit is to appeal to great capitalists, who are invited to tender for loans, whereas in France the habit is to appeal to the small lenders, to the people, and, I think, I may say, almost as a matter of fact, that in France that system is very successful, and that the people do very largely contribute towards the loans which the French Government have occasion to raise. Now, is it not the case that in India, of late years, the English system has been adopted absolutely, and that at this moment the Government of India, in attempting to raise a loan, have not appealed to the people at large, but have confined their mode of raising a loan to a system of public sealed tenders at Calcutta to be sent in on a fixed day, and in all respects strictly according to the English method?—It is.

665. When was the mode of offering by tender introduced into India?—It had been the practice of the East India Company to borrow in India by means of open loans, and money gradually filtered into the Treasury. Subsequently that system was condemned. I remember its being described as the "profligate system of open loans." The East India Company never had power to raise in England more than 7,000,000 *l.*, and that was by the issue of bonds, and they hardly ever exceeded 4,000,000 *l.*, but when large sums were required in this country consequent on the Mutiny, it was thought, and I think wisely thought, that they would be obtained on better terms by inviting tenders for debentures or for stock. A change was therefore made, we have not always adhered to it, because when we have had power to borrow we have at times obtained considerable sums by selling stock without advertising a loan.

666. That is to say in England?—Yes, in England, in India they followed the same course, they considered that it would be better to invite tenders for their loans, and in some cases it

Sir George Campbell—continued.

answered well. In the years 1874 and 1875 they obtained very favourable terms, being between 102 and 103 for 4 per cent stock.

667. But was not the term "profligacy" applied to the system of open loans in respect to the unlimited power of borrowing which it seemed to imply, and not to the mode in which the loans were raised, supposing it were necessary to raise a certain sum of money?—It was applied to the open loans. It was alleged that whether we wanted money or not, we were always keeping a loan open, and that that led to wasteful expenditure.

668. But it was not in other respects the system of appealing to every treasury in the country which was considered wasteful and extravagant?—No.

669. Now I want to ask whether, in your opinion, of late years, this system of taking up loans by tender has been generally successful, whether, considering the limited number of capitalists in India, there is not some danger of combination among them, and whether it is not the fact that as respects the last two or three loans which have issued, the value of those loans has invariably risen several per cent in the market immediately after the Government have made their bargain?—Yes, it is open to question whether the plan of inviting tenders for a loan in India is at all times the best.

670. Have you had occasion to observe in the case of the last two or three loans, whether the Government have really got advantageous terms, or whether, in fact, they have been obliged to submit to terms less advantageous than had previously prevailed in the market, and considerably less advantageous than prevailed in the market immediately after the loan had been effected?—Yes, generally the terms which they have obtained have not been so favourable, but that is not uncommon. It occurs in this country as well as in India.

671. Is it not the case that, even in the great London money market, there is some risk that there may be a great deal of trades unionism and combination amongst capitalists?—No doubt.

672. Do you think that, with regard to bills drawn on in India, the Government always get the most favourable terms the market will admit of?—I have never seen any sufficient reason to believe the contrary.

673. At all events, do you not think that a comparatively small money market, such as the Indian money market, is distinctly liable to the danger of combination?—Peculiarly so, no doubt.

674. Do you think it would be possible to combine the system under which the open loans were formerly raised, with a limitation to the total amount which the Government were authorised to raise?—No doubt it would be possible, but still very difficult.

675. Do you think there would be any practical difficulty in the way of opening the Government treasures all over the country to small lenders who might be willing to lend their money to Government after the French fashion?—So far as opening the treasures to subscriptions to a loan goes, there could, I apprehend, be no great difficulty, the Treasury officers can be relied upon,

Evidence of SIR THOMAS LAWRENCE SECOMBE, K.C.S.I., C.B., 20 March 1879—continued.

Sir George Campbell—continued.

upon, and therefore it might be done; still, alive as the Government of India are to the importance of obtaining subscriptions from natives, I conclude that they have never yet been able to satisfy themselves that they could devise such a plan as you suggest.

676. Do you not think that public officers and others are sometimes a good deal wedded to the old grooves, and that it might be somewhat difficult to induce the Financial Department of India to depart from a practice on which they have taken their stand?—The Financial Department of India departed from the system of open loans, which was a tradition in India, when it appeared to be desirable; and I think they would be quite ready to change again.

677 Was not it the case that under the old system of open loans a great deal of money came in by dribbles to the Treasury at a very low rate?—It did.

678 You stated in the early part of your evidence to-day that you had reason to believe that a larger portion of the debt of India was now held by natives in India than in former days, have you thoroughly sifted and gone into that question?—I have the particulars for several years showing that there has been an increase of such holdings.

679. Will you be so good as to state to the Committee what years you have compared?—I have taken from 1868 to 1878. The debt in India amounted on the 31st December 1878 to 76,860,528 *l*. Of that sum there had been presented for interest, during the previous half-year, 29,685,391 *l* by Europeans, and 14,883,083 *l* by natives. Applying the same proportions for notes not presented during that period, there would be 10,422,327 *l* held by Europeans, and 5,225,343 *l* by natives, making 40,107,718 *l* held by Europeans and 20,108,426 *l* by natives. The remaining portion of the debt, 16,644,384 *l*., consisting of notes enfaced for obtaining Interest Bills in England on the Government of India is doubtless held by Europeans.

680 Is it not the case that in former days, in the days of open loans, and in the days before the mutiny, in reality the natives held a very much larger portion of the debt than they do now?—I believe so; but the returns received from India prior to the mutiny are very incomplete.

681 But from such information as you have, you have reason to believe that in those days a very much larger portion of the debt was held by natives than is held by natives at present?—I think it is probable, because the money came in in smaller sums.

682. Is there not some fallacy in the statement you have put in, inasmuch as you tell the Committee that under the modern system of enfacing the paper for payment in England, you have excluded the whole of that enfaced paper; is it not to be expected that a very large portion of Government paper held by Europeans is now enfaced for payment in this country, and, therefore, you have withdrawn a large amount of that held by Europeans from the comparison as compared with the amount held by Europeans in former years?—But still, even if you add all that por-

0 61

Sir George Campbell—continued.

tion held by Europeans, the proportion held by natives has increased since 1868

683 Can you give the Committee the figures for that?—In the year 1868, the amount held by natives was 14,700,000 *l*., in 1869 the amount held by natives was 14,600,000; in 1870 it was 13,300,000 *l*.; in 1871 it was 16,200,000 *l*.; in 1872 it was 14,900,000 *l*.; in 1873 it was 16,500,000 *l*.; in 1874 it was 17,100,000 *l*.; in 1875 it was 17,400,000 *l*.; in 1876 it was 17,800,000 *l*. I have not the return for 1877; and in 1878 it was 20,100,000 *l*.

684. I think you said that 14,000,000 *l* was actually presented as held by natives, and that 6,000,000 *l* was the proportion of the paper which was not presented but which was taken as held by natives?—Yes; this account is made up to the 31st December 1878, and the amount which has then been presented, within the half-year for payment of interest was 29,685,000 *l* as held by Europeans, and 14,883,000 *l* as held by natives.

685 What is the nature of the paper which is not presented?—Paper in the hands of holders who have not sent it in for dividend.

686. Surely there cannot be a very large proportion who have not drawn their dividends?—Yes, who had not drawn them at that time. The loans ran from different periods; and the dividends are payable at various dates.

687. As I understand, the total held by natives had increased from 14,000,000 *l*. in 1868 to 17,000,000 *l*. in 1874?—Yes.

688. And it has increased to 20,000,000 *l*. in 1878?—Yes.

689 Do you think that 20,000,000 *l*. is a safe figure?—I think perfectly so.

690 Do you know by whom the statement is made?—This is the return furnished to us, and which has recently come to hand as regard the last year.

691. Will you hand that statement in?—I will. (*The same was handed in*)

692 The total amount of the debt of India between 1868 and 1878 has increased in at least as great a proportion as the amount of native holding, has it not?—The debt has increased from 62,000,000 *l* to 76,000,000 *l*; that is the total amount of debt in India, including the enfaced paper.

693 I think you stated that in one of the loans a large proportion was taken by natives upon more favourable terms than in more recent loans?—That was so.

694. Was that really an investment by natives, in your opinion, or was it only the native bankers taking up the loan in larger amounts than they had been in the habit of doing, in order to put it on the market?—We have no means of ascertaining in this country who took it up.

695 Do I understand that beyond borrowing for productive public works, you would be distinctly against borrowing for improvements which are not of that productive kind; for instance, for such a case as that in respect of which a loan was raised in England, namely, for the defenses and fortifications of the country?—We resisted strenuously borrowing for barracks, which was a very pressing necessity after the mutiny, and I think we did so wisely; I do not think that In-

4 R 4

dian

Evidence of Sir THOMAS LAWRENCE SECCOMBE, K.C.S.I., C.B., 20 March 1879—continued

Sir George Campbell—continued.

dian finance will bear borrowing for productive public works, and also borrowing for other works considered to be necessary.

696 Is that answer, then, given with regard to the present state of the Indian finances; supposing we were in this position, that we had a considerable surplus of revenue, from which it would be possible to establish a sinking fund, would you consider it would be imprudent to borrow money in order to make great public works which were clearly beneficial to the country, though not immediately reproductive?—If you had a considerable surplus revenue which would be available for the purpose without borrowing, surely that would be sufficient for your object.

697. It might very well happen that you might have a million or two of surplus revenue, and you might be desirous of constructing great public works which would cost 20,000,000 *l.* or 30,000,000 *l.*, I would ask under those circumstances, whether you would consider it prudent to borrow for works for the general benefit of the country?—If I were responsible for the finances of India, I certainly should not like to do it.

698 I should wish now to ask you a question or two with regard to the famine fund, which was a fund established as a surplus fund in order to provide against famine contingencies, I understand Sir John Strachey's calculations to have been this, that the expenditure upon famines might be calculated to amount upon an average to about 1,500,000 *l.* per annum; is that so?—He estimated that 1,500,000 *l.* per annum upon an average was not a larger amount than, judging from our recent experience, it was necessary to regard as the probable expenditure during 10 years.

699 Does it seem to you that sufficient provision is made for this expenditure of 1,500,000 *l.* when we are told that 750,000 *l.* is to be accumulated in cash, and that the other 750,000 *l.* is to be expended upon what are called preventive works?—We are placed between two fires. We have on the one hand the Public Works Department and the Government of India urging strongly that, by the judicious expenditure of a comparatively small sum upon protective works, not only could you get some income from those works, but that famine would be deemed very much of its terrors, on the other hand we, having power from Parliament to raise money, have used it, and I think Parliament might say to us, if we came for fresh power, what have you done with that which we previously gave you, you have expended the money raised for relief of famine nominally, but although the people of India have been taxed to the amount of 1,500,000 *l.* a year to supply a famine insurance fund, no portion of that fund has come back to repay you what you advanced on account of famine, but it has been applied to public works. Therefore, I think the Secretary of State has adopted a wise course in insisting that, if it be practicable to obtain it without serious loss in the mode of remittance, one half of the famine insurance fund, instead of being applied to keep down debt in India, should be remitted to this country to recoup us the amount which we advanced.

Sir George Campbell—continued

700. I quite understand and appreciate what you have said as regards the two fires and the Public Works Department; what I wish to put to you is, apart from the fire of the Public Works Department, whether it seems to you that Sir John Strachey's plan of raising 1,500,000 *l.* a year to meet a total expenditure of 15,000,000 *l.* in 10 years is consistent with his plan of spending that money upon preventive works, and whether, looking at it from a financial point of view, the Secretary of State was not bound to go a good deal further than he has, and to say, not only if circumstances admit of your remitting 750,000 *l.*, you must do it, but also if circumstances require you to put aside 1,500,000 *l.*, you must do it?—We must in this country accept the assurances of the Government of India upon certain questions, such as those connected with protective public works. If they say that in certain districts there is a great want of water or of means of communication, which, when a famine occurs, renders it much more difficult to deal with it, and thereby entails upon them a very considerable expenditure, and that a sum of about 6,000,000 *l.* might be expended in five years upon works of that nature, which would indirectly, if not directly, repay us, I think it would be an exceedingly strong measure on the part of the authorities in this country to say to the Government of India, we are not satisfied of the wisdom of the course you propose, and must upon more than half of that famine insurance fund being remitted to us in repayment of the money which we have advanced to you.

701. Let me put it in this way, you have told the Committee that about 14,000,000 *l.* have been expended on famine works in the last few years. I want to know whether, under the present arrangements, you see any prospect of that 14,000,000 *l.* being recouped?—No, there is little chance of our getting anything like 14,000,000 *l.* recouped before some further claim for aid will again arise.

702. And supposing we have famines the next 10 years involving equal expenditure, do you see any prospect of that expenditure being met as things now stand?—To a certain extent, if we receive annually the 750,000 *l.* accumulated amount would be available to meet a future famine. I think it is important that the Government of India should understand that they must depend upon themselves more than they have done in regard to borrowing in cases of emergency.

703. But what I want to put to you is this, taking Sir John Strachey's own views of the matter, taking the fact that 14,000,000 *l.* have been expended on famine within the last six years, and that according to his calculation, they would be likely to be obliged to spend 15,000,000 *l.* more in the next 10 years, I would ask whether, as matters are now arranged, this famine fund is likely to meet and satisfy that expectation?—If an expenditure of 15,000,000 *l.* be required during the next 10 years on account of famine relief, whatever sum may have been remitted to this country would be available, and if half the famine fund had been remitted 7,500,000 *l.* could be applied towards relief; the other half of the fund may have been spent in India in protective works, and

Evidence of Sir THOMAS LAWRENCE SECOMBE, K.C.S.I., C.B., 20 March 1879—continued.

Sir George Campbell—continued.

and if those works are not remunerative in the sense of protecting us from the consequences of famine, the deficiency should be supplied by borrowing in India.

704. At all events the cash remitted, namely, three quarters of a million, liable to interruption and likely to be interrupted, will not be likely to meet the whole of those requirements?—Certainly not, if we are to have a famine again so serious as to involve an expenditure of 15,000,000*l.* in 10 years.

705. You have also told the Committee that, as a matter of fact, since this famine insurance fund has been established, the money has been available neither to recoup past expenditure, nor to meet future expenditure, but has been expended in other ways?—I am not aware whether the Government of India has expended any on protective works, I have no information upon that point.

706. You have not seen anything of the money?—I have not.

707. Do not you think it would be practical to establish trustees in the position of the National Debt Commissioners in this country, who are, I believe, in the habit of constantly lending the funds of friendly societies and savings banks which come into their hands to the Government, and that this famine insurance fund should be committed to the hands of that body year by year, it being permitted to them in years when they had not occasion to expend the money upon famine, to lend it to the Government in other departments, just as the National Debt Commissioners do habitually lend their funds to the Government of this country?—It would be, no doubt, possible to establish such a body. Whether they would be public officials, as the National Debt Commissioners are in this country, or whether they would be other than Government servants, I think in either case it would be exceedingly unwise to give to a body so constituted powers to borrow independently of the Government. Such an arrangement would be exceedingly inconvenient to the Government of India they might be wanting money when the Commissioners could spare it, but might refuse to do so; it would in fact be locking up a portion of the cash balances in a way which does not appear to me to offer any probable advantage.

708. Are you aware that the National Debt Commissioners do, as a matter of fact, exercise functions of that kind in this country, and that the Chancellor of the Exchequer does constantly borrow money of them, and that so far from his complaining that they will not lend him money which it is desirable that he should borrow from them, it has, on the contrary, been an extreme convenience to the Chancellor of the Exchequer, as on many occasions he has been able to get over difficulties by borrowing from the National Debt Commissioners, when owing to particular complications, it might have been impossible to borrow from anyone else?—I am aware that that is the case in this country, but the whole constitution of this country is so different from that which exists in India, that I am unable to see how any advantage could be obtained by the introduction of that system there.

709. Even without establishing separate Debt

0 61.

Sir George Campbell—continued.

Commissioners, would it not be possible to insist that the Government of India should enter in their own books a separate famine account, and that this should not be mixed up with other expenditure?—I think that it is very important indeed that a clear statement should be rendered of the expenditure of the Famine Fund.

710. Is it not the case that there is no separate account now of the expenditure of that famine insurance fund, and that it is mixed up with the general revenue?—That is quite true.

711. And that that gives rise to the temptation, of which this year advantage has been taken, to spend it along with the general revenue?—It may be so.

712. I did not quite understand what you told the Committee as regards the plan for transferring productive works, which had proved not to be productive, to the category of ordinary works; in that case, is it proposed that the ordinary department of public works should repay the capital expended upon those public works?—If you undertake a work upon the ground that it is productive, it is included in the productive expenditure; and if, during its progress, it is found that the estimates are very much too low, that it will cost double or treble the amount estimated, and the Government then see that there is no reasonable ground for anticipating that it will be productive, the direction is that it should then be removed from the class of productive public works. Whether the works are to be stopped, or whether they are to be continued, rests solely with the Government in India, but there is no longer any ground for continuing to construct that work from borrowed money, and therefore it must be included in the ordinary expenditure under a distinct head.

713. Those orders have been actually issued, have they not?—Yes, they have, and the Government of India have recognised them.

714. Will not the effect of that order be, as it were, to enable the Extraordinary Department of the Public Works to get rid of all their bad bargains, so that when they make a statement showing the profit upon their works they will show only the profitable ones, and will pass the others on to some other account?—But you must show the expenditure somewhere; and I would ask whether it is not more desirable that it should be removed from the category of productive public works, and still proceeded with from the money raised year by year, than that it should remain and swell the amount which you would have to borrow.

715. That may doubtless be so, but we have already heard that when the Public Works Department submit a Statement showing a profit upon their so-called productive works, they have included on the one hand a considerable class of native works made before the Public Works Department expended any money on them at all; would it not have been but fair that, on the other hand, they should also show their failures, namely, the works which had eventually proved not to be profitable?—If the object were to show the Government how inaccurate the estimates had been, that would be the best plan; but if the object be, as I think is wisest, to prevent public works, which will not be remunerative, being constructed

Evidence of Sir THOMAS LAWRENCE SECOMBE, K.C.S.I., C.B., 20 March 1879—continued

Sir George Campbell—continued.

constructed out of borrowed money, I think the existing rule is better

716 But is it not very much a matter of account, is it not the object to show the public how far the so-called reproductive works have really been reproductive, and how far they have not?—I think the public will find it very difficult to ascertain that, because while the works are under construction, however clearly the accounts may be prepared, they will not give a distinct view as to whether the works pay or not.

717 I should just like to understand this Under the existing orders when a work half constructed is found not to be profitable and is transferred to the ordinary department, where does the capital account of money already expended upon that work appear?—That capital would appear under the head of Productive Public Works.

718 It would remain so, and the total would be shown?—Yes.

719. Then if a sufficient system of accounts were established, under which accumulated interest and everything else were shown, and it were clearly made apparent whether a work was really productive or not, do you think that you then might be able to enforce your rule upon the Government of India to a greater extent than you have hitherto succeeded in doing?—I think this new form of account, when fully rendered by the Government, will enable the Secretary of State to enforce his rule much more effectively than he has done.

720 Then I understand that the Home Government have distinctly, and so far as is at present known, finally negated the system under which the Government of India proposed that a certain amount of dead weight should continue to be borne?—Yes, they have.

721 And as you have explained the matter, I understand your view to be this, that the dead-weight plan amounts very much to this, that the growing income of paying works, such as the guaranteed railways, may under that system be made away with on non-paying works in the future?—That is so

722 And you think that is an undesirable system?—I do

723 Has it occurred to you to account in any way for this tendency of the Government of India to be more extravagant than the Home Government; do you think that the atmosphere of popularity or unpopularity, under which Indian administrators live for a few years, is very apt to lead them away into extravagances for a time?—I should be more disposed to attribute the disposition of the Government of India to proceed rapidly with public works believed to be productive to the influence of the very able Public Works officers on that Government.

724 Do you think that this tendency of the Indian Government to exceed the control of the Home Government in this matter has been increasing of late years or not?—No; it existed, and it was urged equally strongly about the years 1868 and 1870, as it has been now, that is to say, the execution of large works and borrowing in this country, in order to enable them to carry out those works.

Sir George Campbell—continued

725. Do you think that as the Home Government is now constituted, and as the Government of India is now constituted, the control of financial matters is as effective as it was in the days of the East India Company?—I think it is more effective, because great works were often undertaken and completed before the Court of Directors knew much about them, communications with India not being so rapid or frequent.

726. I should like to ask your opinion upon a question I broached before the Committee last Session, and that is whether in regard to public works of almost every kind, you would approve of something in the nature of a sinking fund being established?—In a strictly financial point of view, a sinking fund is a mistake while you are still borrowing, but considering that it is likely that we shall be borrowers for many years to come, I think that borrowing in the shape of a long annuity, which is pretty nearly the same thing, would be a very wise course for the Indian Government to adopt.

727 Do not you think that as a mere matter of account, in order to enable us to judge whether our financial conduct with regard to Public Works is prudent or not, it would be right to debit all public works with something in addition to the mere interest, that is to say, with something in the nature of a deterioration fund?—There is no doubt much to be said for such a course, but until we have attained the greater object we have in view, at present, I think it would be unwise to introduce that system. My idea is, that in borrowing it would be wise to pay a little more in the shape of a long annuity than to pay the bare interest, because then the debt would expire after a certain number of years.

728 I want to put it in this way if a man builds a house as a commercial speculation he is not satisfied if he should get as the interest of his money merely an equal amount of rent, he thinks he should get something more, as the house will wear out; now, upon that ground, in order to make the work safe, from a financial point of view, do you not think that the Government of India should get a little more out of the works than the mere interest for the money?—If they can get it no doubt they are right in doing so

729 As regards borrowing in India, you have told the Committee that so much has been borrowed in India, and so much has been borrowed in England. Now was not the last year's loan, what I may call a sort of hybrid loan, which was neither distinctly borrowing in England nor in India, but which admitted of transfer from one to the other under certain circumstances?—Only as enfaced paper, not like the old transfer loans

730. But was not there a loan in 1878-79 which the creditors could claim to have paid in gold?—No, an option was given of receiving in rupees in India interest which would vary according to the rate of exchange.

731 But they would be entitled to claim their interest in this country, would they not?—No, certainly not

732 Do you think that when the Government of India go into the market in India to borrow they are restrained as regards the amount of borrowing solely by the interest of the Government, that there is not some pressure put upon them

Evidence of Sir THOMAS LAWRENCE SECCOMBE, K C B I, C B, 20 March 1879—continued.

Sir George Campbell—continued.

them by the mercantile community, who say, If you borrow too much here you will disturb all our mercantile arrangements?—Probably some pressure is put upon them

Mr. Ashbury.

733 I think that, as a general principle, railways in India are being, or have been, constructed with the knowledge that they might not pay interest, but that indirectly the advantages justified the expenditure?—That has been the case, no doubt

734 Is it your opinion that any sums might be expended on irrigation works, producing no interest, where there is a reasonable probability of an increase of revenue from additional land being brought under cultivation?—That, no doubt, might be a sufficient reason, but if additional land would be brought under cultivation through the agency of irrigation works, surely that income would be due to those works, and would justify their being constructed if the money derived from them was sufficient to pay the interest.

735 Generally speaking, what is the minimum rate of interest at which money could be raised in India for public works, either irrigation or railway?—It varies very much at different times, five years ago we could borrow at less than 4 per

Mr. Ashbury—continued

cent., the interest was 4 per cent., but we obtained a premium, whereas now a 4½ per cent. loan might not obtain a premium.

736. How do you treat advances in your accounts which are made to corporate bodies where they are not repaid?—In the Finance and Revenue Accounts, every year there is a statement showing the balance outstanding against the different bodies at the beginning of the year, the amounts advanced and repaid during the year, and the balance outstanding at the end of the year

737. Probably you will agree with me, that without a guarantee, the railway system as now existing in India would not have been an existence?—Certainly.

738. Without stating your political reasons, do not you think that exceptional circumstances might arise where a Government guarantee would be indispensable, where the railway itself would not commercially pay?—Such a case might no doubt arise but provision should be made, I think, rather for the Government undertaking the work itself, than guaranteeing a certain amount of interest to a company

739. You think that, in that case, rather than that the Government should give a guarantee to any railway company, who would construct the line, the Government should construct the line itself?—I think so

EVIDENCE OF SIR THOMAS LAWRENCE SECOCOMBE, K C S I., C B., 21 March 1879

Chairman.

740 CERTAIN Members of the Committee are anxious to have the cost of the total establishments connected with the Public Works Departments, whether those establishments are employed in carrying out public works ordinary, or public works extraordinary, could you furnish the Committee with such a statement?—Yes, we will have a statement prepared as completely as the means at our disposal will enable us to do, it may be necessary, in order to get a very useful statement, to ask the Government of India to send one home. It would be very desirable to have it, and then it would be open to anyone to apportion the expenditure on establishments and furlough allowances, according to the amount expended on the construction of the works.

741 I believe the member of the Viceroy's council in charge of the Public Works Department does annually make a statement as to the total sums he will require for carrying on both classes of works, both ordinary and extraordinary?—He does.

742 Then if we get the total cost of the establishment, including the central and supervising establishment, it would be easy to apportion the charges in connection with that department in proportion to the total disbursements of the department?—It would.

743 And to debit the expenditure in connection with public works extraordinary with a certain charge?—Would it be the desire of the Committee that the Public Works Secretariat should be included? You wish, I understand, really to gather together all the expenditure which can be said to be attributable to public works.

744 Without sending out to India, you could get from the Papers at the India Office, could you not, a sufficiently accurate statement?—It would not be a complete statement, but the preparation of it would show what more would be required, and it would be one great step towards getting what was really valuable. The statement would be very incomplete, as the information required would have to be sought in various ways, not merely from accounts, but from other sources as well.

Mr. Cross.

745 Would the return include superannuation allowances, pensions, and furlough allowances, and would any estimate be made which included them?—The furlough allowances could be included. I think, as regards pensions, it would be very dangerous to rely upon any estimate which could be made in this country. We have no sufficient data on which to form an estimate of how many years a civil engineer may be expected to serve in India. They are professional men, who may come home and resume their profession in this country. We have had so little experience of how long, for instance, those engineers who are going out from Cooper's Hill will remain in the service, that it would be exceedingly difficult, and I doubt if it would be wise, to attempt to give an estimate

Mr. Cross—continued.

here of what would be the probable cost of their superannuation allowances.

746 Then you could not give any estimate of the time when the superannuation allowances would be increased or decreased?—No, in preparing any estimate, it would have to be assumed that the existing rules will be continued.

747 Can you give the Committee any information with reference to the cost of the public buildings connected with the engineering works in India, for instance, the cost of the public buildings which contain the staff?—No, that must come from the Public Works Department.

Mr. Sampson Lloyd.

748 Upon the point of furlough allowances, I wish to ask you what they consist of, do they include any allowance for travelling expenses, or are the furlough allowances merely a payment during absence from duty?—The furlough allowance is a certain portion of the salary only which an officer draws, not including travelling expenses.

749 I presume that furlough allowances are granted to Europeans only; are they granted to natives too?—We rarely have natives coming to this country on furlough. A certain class of native servants might claim the privilege if they wished, but they do not.

750 Does not that go to show that the employment of natives, where suitable, would affect an economy in the point of furlough allowances as compared with the employment of Europeans?—Certainly.

751 Upon the subject of Public Works, may I ask do you know whether any portion of the expenses upon any particular public work is contributed from the funds of local governments, municipalities, or other local bodies?—No portion of those which are the subject of the present inquiry, that is works constructed from money borrowed by the Government of India.

752 I take it that your answer is conclusive upon that point, that nothing comes from those sources?—I was under the impression yesterday that very small sums had been obtained from natives in India for public works, and that Sir George Campbell, while he was Lieutenant Governor of Bengal, had obtained some small sum on that account, and that it was well expended. He said it was not so, and he went further, and said that upon that which I had certainly considered a desirable mode of obtaining funds for constructing works, nothing worth mentioning had been received.

753. Then upon another subject I would like to ask you one question; you were good enough to state, in your evidence yesterday, that 27 millions and some odd thousand pounds had been added to the public debt of India in the last six years, can you tell the Committee how much of that addition may fairly be attributable to the loss on exchange during the last six years?—I could give from the accounts the loss by exchange on the one side, but in order to give an accurate view it would be necessary to show how much

was

Evidence of Sir THOMAS LAWRENCE SECCOMBE, K C.S.I., C.B., 21 March 1879—continued.

Mr. Sampson Lloyd—continued.

was to be credited on the other side, because there is a gain as well as a loss by exchange, I will put in a statement showing the nett loss by exchange during the last six years.

754 Are not the accounts as they come from India all presented in rupees?—No, they come home in pounds sterling.

755 Then as the expenditure, or a great deal of it, is conducted in rupees in India, I presume they are converted into pounds sterling in India at the rate of 10 rupees to the pound?—They are.

756 Is not that very misleading to the English public as regards the true cost?—No doubt it may be so, when the exchange varies so much as it does at present, it necessitates that inconvenient item of "loss by exchange," but, on the other hand, the system has great advantages, because comparison is easy under such a mode of treating the rupees. If the accounts were rendered at rates of exchange varying in different years, it would render any comparison exceedingly difficult. Up to the year 1856-57 inclusive, the accounts were presented at 1s. 10½d. the rupee. In 1857-58 a change was made to 2s.

757 Considering that the rate of exchange varies in that way, would it or not be better that the accounts should be published in rupees and not in sterling, when the comparison would of course be easy?—There would be no difficulty in publishing an abstract statement of transactions in India in rupees as well as in pounds sterling.

Mr. Onslow.

758. You are aware that in very high quarters it is stated that the sum expended by the old East India Company on public works is very small indeed?—It was comparatively small.

759 Can you furnish the Committee with a statement showing how much was spent by the East India Company before the annexation of India to the Crown, say for 25 years before the year 1858, on irrigation works, and how much on other kinds of public works?—I am afraid we could not obtain that information in this country, it could be furnished in India.

760. Are you aware whether there was any considerable sum spent by the old East India Company on what we should now call public works extraordinary, that is to say, works for the prevention of famine and for irrigation?—Irrigation works were constructed by the East India Company from an early period, in fact it is difficult to say when small works were first executed, but the Ganges Canal was a very large work which was undertaken at an early period by the East India Company, and in the year 1854 they gave instructions to the Government of India to proceed with irrigation works to the extent of a million a year in addition to that which they had previously been expending.

761. Was the primary object of the construction of the Ganges Canal for transit purposes or for irrigation purposes?—It was for both, I believe.

762 Therefore, previously to the year 1858 the old East India Company had done as much as they could, considering their revenue, towards irrigation works and the prevention of famine?—They had.

061.

Mr. Onslow—continued

763. And had given instruction for the further prosecution of works under that head?—They had.

764. When the Government of India sanction a work, and send it home for the approval of the Secretary of State, they invariably use the word "remunerative," am I to understand by that that they specify to the Secretary of State how much per cent. they expect the work to pay, and in what other way it will be remunerative, or do they use the word "remunerative" in a broad sense, without informing the Secretary of State how much they expect to realise by the work when completed?—When a work is submitted for the approval of the Secretary of State with detailed plans and estimates it is submitted in the Public Works Department, and is there considered, it does not come before the Financial Department. The form in which works are submitted for approval may vary, but there must be a description of the work, with a statement as to the probable cost, and what return may be anticipated from it.

765 Then I may presume that they use the word "remunerative" in a broad and general sense?—In a broad sense, and I assume that it can only well be termed remunerative so as to be placed under the category of Productive Public Works, if it fulfils the conditions which the Secretary of State has laid down, that is to say, that it shall yield interest upon the capital outlay on the work, including interest during the period of construction.

766. Do the India Office always satisfy themselves that such will be the case before the work is sanctioned?—Certainly, not through my agency, but undoubtedly that is done.

767 I presume that you, from your great experience of the finances of India, approve of the plan of keeping an annual reserve for famine purposes?—I do.

768 That may be all very well in theory, but do you think that the Government of India will ever seriously be able to accomplish that purpose?—Not unless they observe the very rigid rules which we have prescribed. I think that when the Government of India obtained by new taxation 1,500,000 £. with a view to provide for future famines, it became incumbent on them to apply a portion of that 1,500,000 £. towards repaying the debt which the Secretary of State had incurred for famine; and then when a famine again occurs, he will be in a position to expend afresh.

769 Let me put a case in point, namely, the 1,500,000 £. which you mentioned, one-half of that, or 750,000 £., is to be sent home to the Secretary of State in payment of the expenditure on bygone famines, that is really what it amounts to, is it not?—On recent famines, in fact expenditure is being incurred on account of famine in the present year.

770 But still I may say for bygone famines?—Not antecedent to the very recent famines, which led to the taxation being imposed.

771 That leaves 750,000 £. for the Government of India to expend, and to keep as a reserve for famine purposes?—Yes.

772 Now supposing there were a war on the frontier, the same as we may always expect in India,

Evidence of Sir THOMAS LAWRENCE SECCOMBE, K.C.S.I., C.B., 21 March 1879—continued.

Mr Onslow—continued.

India, such as the Bhootan or the Umballa expedition, how would that expenditure be met out of the charges of the year, would you propose to touch the 750,000 l.; again, you are aware that in 1864 there was a very serious devastating cyclone in India, which cost the Government about a million of money in the repair of public buildings, if India were ever visited by such a calamity again, would you propose that any portion of this 750,000 l. should be expended either for this little war, or for making good the effects of the devastating cyclone?—In the event of war, or any emergency other than famine, calling for expenditure, if it cannot be provided for out of the income of the year, which is improbable, any Government would be compelled to borrow money to meet the cost.

773. Therefore, though you may be able to realise the 750,000 l. surplus, you would propose that that should not be touched, notwithstanding anything else which might happen which would create a deficit?—As regards the 750,000 l. which is to be sent home, I think it should absolutely be applied towards building up a famine fund here, by repaying what we advanced them, in order that it may be again available for the purpose for which it was raised.

774. Though you might have this surplus in India of 750,000 l., besides the 750,000 l. which are sent home from India to the Secretary of State, you would propose to borrow money in case a great calamity were to reduce your surplus into a deficit, notwithstanding that you were able to send that 750,000 l. home and keep a similar amount in India as well?—If it were not required for preventive works it would remain in the cash balances of India, and would be available for any purpose.

775. Therefore the idea of the Government of India would not be carried out, because this 750,000 l. need not be spent for famine purposes; it might be spent upon a war?—But we calculate that 750,000 l. is within the amount which they would expend annually on famine works; and I apprehend that such works once commenced would hardly be put aside in the event of a war, if they were really useful and important works.

776. Therefore, in case of emergency, your idea would be that the Government of India should borrow money?—Certainly, unless their cash balances should have accumulated by surpluses so as to bear the expenditure.

777. What I want to ask you is this: this is the revenue for famine purposes, if this money is to go into the cash balances, and the Government does not require it for famine purposes, would it not be rather an odd thing that the Government should not take it out of the cash balances and put it into the war?—No doubt there is force in that observation, but if the 750,000 l. is not required in India for productive works, it should be sent home to reduce the debt in this country, which has been incurred for famine purposes.

778. Has that view of yours ever been put before the Government of India?—Not definitely. It was by a sort of compromise that 750,000 l. was to be remitted to England. We, in England, having used the power of borrowing given us by Parliament to meet the famine, were

Mr Onslow—continued.

very desirous to replace ourselves in a position to borrow afresh, if it should be required and we could not do that except by obtaining from India the repayment of the sums which we had advanced. On the other hand, in India, they were desirous of expending it either on protective works, or of applying the amount in reduction of that which they would borrow there for productive public works. Now the paying off or keeping down the debt in India is a very different thing from enabling us to pay off a debt which we have incurred here.

779. Now, if the cash balance were what I may call flush with this money, and some calamity happened in India, either a little war, or, as I said before, a cyclone, would it not seem odd that you were obliged to borrow money to pay for these calamities when your cash balances were overflowing?—If the cash balances in India were unnecessarily large, it would be unwise to borrow, but the position of the Secretary of State is that the first charge on the famine fund is the repayment of the sum which has been raised here.

780. In the cases which I have stated, the money which you may send home out of this cash balance would be purely optional, and therefore the cash balances would lie at the mercy of any Finance Minister, who would say, I will not send home this amount, I want a certain amount to pay for this little war; it would be a singular state of finance, would it not, if the Finance Minister were to say I cannot send home the entire half, but will keep 350,000 l. to pay for a little war?—It would not be dependent on the Finance Minister, but on the Government of India. It would be contrary to the obligation imposed on them, and the Secretary of State would, no doubt, require that his orders should be observed.

781. You think that the Secretary of State would say, Notwithstanding anything that has happened, your cash balances are in default of sending home 550,000 l., notwithstanding that you have sent home 200,000 l.; instead of paying for your war out of that money you must borrow for the purpose?—I think the Secretary of State would say so.

782. Has it ever been put in that strong way that the Government of India expect it?—We have very plainly stated that the repayment of money borrowed here is a first charge on the famine fund, and that they must be prepared to remit three-quarters of a million annually.

783. And that they must not expect to draw upon it for any accident which might happen in India?—We have not said that in so many words, we considered that that was implied in the requirement that it should be sent home.

784. But still that is the effect of your answer this morning?—Our expectation is that they will abide by the instructions given.

785. Advances to municipalities for irrigation purposes would come, would they not, out of this reserve fund?—No, the advances to municipalities have nothing to do with the famine insurance fund.

786. The Government of India would spend that money?—Out of the money which the Government of India raise, they make advances to municipalities, I should be inclined to think that

Evidence of Sir THOMAS LAWRENCE SECOMBE, K.C.S.I., C.B., 21 March 1879—continued

Mr Onslow—continued.

that those advances have nearly reached their maximum

787. What is really the practical financial control which the Government of India have over the different municipalities, and over the different local governments, as regards the money which those have borrowed?—Every advance of money to a municipality must be approved by the local government. A proposition is then made by the local government, and the sanction of the Government of India is necessary.

788 And they accept the estimates of the different local governments, do they not?—I conclude they do, but you are aware that interest is charged on the advances, and that has to be provided by the municipalities, and there is a sinking fund also required to pay the principal

789 Up to what sum do the Government of India allow the local governments the undertaking of any particular project?—I am not aware

790 Let us take it that a local government wanted to prosecute a work estimated to cost 200,000 l.?—If a municipality satisfies the local government that it would be desirable to execute a work costing 200,000 l., that proposition would go to the Government of India, and it would rest with them to sanction or refuse the advance.

791 You said there was no scheme at present laid down to induce natives to lend from their hoards, I do not wish to go into the question whether the natives have hoards or not; but how is it possible to lay down any scheme unless the people came forward voluntarily?—It is exceedingly difficult, and so difficult that no one as yet has devised a plan which has been found practicable.

791 * Would any plan be found practicable, unless the natives came forward voluntarily?—No doubt the action must be voluntary on the part of the natives, but in former days, when we had an open loan, the natives did not subscribe much more than they have done of late years.

792 Sir George Campbell's questions were put to you to ascertain whether it would not be possible to induce the middle class, or lower orders amongst the natives, to subscribe much as they do in France; do you think any scheme could be laid down which would be likely to have that effect?—I am not prepared to say that any effectual scheme could be laid down. The subject has often been considered, but no one has yet been able to devise a satisfactory plan; some persons have advocated giving a larger amount of interest for small sums to natives than the ordinary rate, but then would come the difficulty, how are you to prevent other persons, through the agency of natives, lending money to the Government, and reaping a benefit which was not intended for them

793 You expressed, I think, the opinion yesterday that the Government of India were less economically disposed than the Home Government, in what respect?—I think I only admitted that the Government of India were disposed to be less restrictive in regard to productive works than the Home Government.

794 Is it not the case that a great number of those public works which have been prosecuted in India have originated with the Home Govern-

Mr. Onslow—continued.

ment?—I am unable to answer that question, it would be necessary to examine the Public Works Secretary on that point.

795 I presume you are not aware whether the initiative, as regards the new barracks, took place in India, or in England?—I believe that a considerable impulse was given from this country towards the construction of barracks, but not officially, and in no way have I ever seen anything more than a desire expressed by Sir Charles Wood, to provide, as soon as practicable, barracks for European troops, but he at the same time distinctly stated that it was not to be done with borrowed money.

796 You expressed an opinion that the Public Works Establishment in India should be reduced?—I did

797 Have you formed any definite opinion how that could be done without at the same time reducing the establishments in England?—No doubt, if you reduce the number of engineers which are annually to be supplied to India, the question would arise whether the establishment of Cooper's Hill College could be reduced, any reduction of the Public Works Department must be effected upon some equitable principle similar to that which has governed the reduction of Government departments in other branches

798 I suppose there would be some sort of bonus given as an inducement to retire?—Yes, something of that sort, it is obvious that if you are to construct works only to the extent of 2,500,000 l. a year, you ought not to have establishments suitable for a larger expenditure

799 And, therefore, I presume you would think that if the establishments in India were to be materially reduced, as they ought to be now, we should no longer require such a large establishment at Cooper's Hill for the training of young engineers?—It would seem to follow.

Mr Fawcett

800. I gather from your first day's evidence that the Secretaries of State for India in Council have all along in a succession of years consistently advocated a policy of care and caution with regard to the construction of public works?—They have

801. It has occasionally happened that the importance of those principles has been recognised by the Government of India, but it has seldom or never happened that the principles have been carried out?—Not fully carried out

802. The supreme power, especially in finance, is vested in the Secretary of State in Council, he wishes a certain policy to be carried out, and he cannot get that policy carried out; to what circumstance do you attribute that want of control?—The Viceroy of India is a very high officer of State; the Government of India comprises within it men of high standing and great ability, their officers in the several departments are generally exceedingly able men, and the responsibility on that Government is very large. I often see it stated in our newspapers that "India must be governed in India." If it be the fact that the Government of India has so great a responsibility, and the people of England think they should not be interfered with unduly, it

Evidence of Sir THOMAS LAWRENCE SECCOMBE, K C S I, C B., 21 March 1879—continued.

Mr Fawcett—continued.

appears to be but natural that the Government of India should consider that in regard to many matters of great importance, they ought not to be controlled too much by the Home Government.

803 I agree with you at once, that saying that India should be governed in India, is a different thing entirely from maintaining a system which nominally allows India to be governed in England, and yet actually allows it to be governed in India, because those in India can shift the responsibility upon the Secretary of State?—I think it would have been well if successive Secretaries of State had exercised a greater control over the expenditure on public works, but I know that is an opinion which is not shared by a very large number of exceedingly well-informed people connected with India.

804 What I understand is, that wherever a power is nominally centred, it should really be exercised so that you should concentrate the responsibility?—I think the Secretary of State cannot divest himself of the responsibility which Parliament has imposed on him, and, therefore, he should take care that his directions are observed.

805 I daresay you have known instances in which the Secretary of State having been anxious to carry out this policy of care and caution in public works, has been overruled by public opinion in England?—I think public opinion in England has exercised at times an injurious influence on public authorities.

806 Up to quite the last few years the influence of public opinion in England has been, has it not, to press the Secretary of State to spend more money upon public works than he might otherwise have done?—It has, decidedly.

807 And the Secretary of State, being a member of a political Government, was naturally almost necessarily influenced by this public opinion?—I think that, to a certain extent, is inevitable.

808. Have you not noticed a great change in public opinion within the last few years, that where formerly you might have said that there was a general belief amongst the English public that scarcely too much money could be spent upon public works, people now begin to feel that great care is required in that expenditure?—Yes, that is so.

809 With regard to a scheme which was presented to you by Mr Childers, that the Government should give, not what we may describe as a full guarantee upon railways and other private works to public companies (meaning by full guarantee a rate of interest which represented the market rate of interest), but something less, that is to say, that if the rate of interest in the market were 6 per cent. they should give a guarantee to the amount of 3 per cent., does not this strike you as an objection to the scheme, that as it is not possible to tell beforehand whether or not a work will repay the interest upon the outlay, it may still involve the Government in a very serious loss if this limited guarantee be given?—Certainly.

810. If it is said that there are works certain to prove remunerative, and if companies will not carry out those works without a full or limited

Mr. Fawcett—continued.

guarantee, does not the fact that they will not carry them out without this guarantee, throw, at any rate, a certain amount of doubt upon their own absolute confidence in the remunerativeness of those works?—It does.

811. Would it not have been wise of the Secretary of State, if any company pressed him to give a limited guarantee, saying to him, We feel perfectly certain that this work will prove remunerative, and you are running no risk, for him to reply: Well, if you feel so confident that the Government will run no risk you cannot mind running the risk yourself?—Of course, any proposition submitted to the Secretary of State would be very fully considered on its merits, and I conclude that any such proposition would be referred to the Government of India for their opinion and that of their officers, and the local knowledge which they possess would enable them to form a better opinion, and to report as to the probable result of the construction of such a work.

812. But does not all experience show that the most experienced persons connected with India cannot really form a trustworthy opinion before a work is undertaken, whether that work will prove remunerative or not?—It has been so in the past, but with the warnings which they have now had, with the responsibility which rests upon them, and with the much stricter inquiry which is now made in regard to any propositions, I should not be myself disposed to think that we must assume that if a favourable estimate be formed in regard to any work, it may not be a sound one.

813. But up to the present time, I do not know what it may be in the future, all experience shows that it is almost impossible to tell beforehand whether a work will pay or not. Many of these works, about which the most confident predictions were made as to their remunerative character, have turned out to be unremunerative in the sense of making any return?—Undoubtedly that is so.

814. And, therefore, considering the financial condition of India, at any rate, it would be prudent to proceed with great caution, and not to assume that it is possible to predict beforehand whether a work will turn out to be remunerative or not, until experience shows that what has happened in the past is not so likely to happen again in the future?—Certainly, and I think that if any scheme of that nature were entertained, it would be a very important element in the arrangement that the interest guaranteed should be paid in India.

815. And paid in silver?—Yes, paid in rupees.

816. That is to say, paid in the same coin which the Company receive as receipts?—Certainly.

817. I understand you to hold a very decided opinion as to the extreme impolicy of constructing public works out of money borrowed in England?—I do.

818. You recognise fully the great danger of a country which receives its revenue in one metal increasing the obligations which it has to meet in another metal?—I do.

819. I understand, then, that you consider, that on the average of years, not more than 2,000,000 L.

Evidence of Sir THOMAS LAWRENCE SECOMBE, K C S I, C B., 21 March 1879.—*continued.*

Mr. Fawcett—*continued.*

2,000,000 *l.* or 2,500,000 *l.* could be raised in India, that you could not calculate on more than that?—I would not like to go so far as to say that upon an average of years, something above 2,500,000 *l.* might not be raised in India for all purposes, but I think it is most essential to lay down the limit of from 2,000,000 *l.* to 2,500,000 *l.* as that which shall be borrowed for productive public works

820 Then the amount which has been borrowed during the last few years for productive public works considerably exceeds (is almost double) that which you think ought to be borrowed?—The amount which has been expended on productive public works in the last six years has been 25,000,000 *l.*

821 That is an average of over 4,000,000 *l.* a year?—Yes, it is an average of over 4,000,000 *l.* a year, and in India, during the same time, the net amount which they have borrowed has been under 11,000,000 *l.*, that is less than 2,000,000 *l.* a year.

822 So that the public works policy has, according to your opinion, gone wrong in two directions, in the first place, during the last six years, about twice as much has been borrowed as ought to have been borrowed, and nearly half of the whole amount which has been borrowed has been in England, whereas you think, considering the present system of Indian finance, that nothing ought to be borrowed in England for public works?—Quite so.

823. I understand that the whole of your evidence goes in this direction, that the public works policy, after all, depends mainly upon financial considerations?—I think so, certainly.

824 And that a public work which might be extremely useful, although it may not prove to be remunerative in the sense of returning the current rate of interest upon the capital expended, may be a very desirable work to be carried out, if it could be carried out from the surplus revenue, but that it might be most inexpedient to carry it out, if it could only be carried out by increasing the debt of India?—That is quite my view, and more especially if there be any increase of the debt in England

825 That being the case, and considering that the financial position of India has been described by the present Finance Minister in these words, "The ordinary revenue is barely sufficient to meet the ordinary expenditure," and that there is no reserve for contingencies, such as war (a reserve is now being provided for famine), does not it appear to you that constructing public works out of borrowed money will gradually and steadily add to the debt of India, even to the limit of the extent which you would recommend?—Yes, there is certainly a danger that it may add to the annual charge.

826 Do you think that that is a correct description (and I have not seen it disputed) of the financial condition of India, and do you think it is prudent, even to the limited extent you have advocated, to increase the debt of India for the construction of public works?—I think you must take into consideration whether it is likely that indirect benefits sufficient to compensate for that small addition to the debt of India may not be anticipated

0 61

Mr. Fawcett—*continued.*

827. But then, if what has happened in the past should occur in the future, and these public works should not pay the interest upon the capital expended, this increased borrowing must necessitate increased taxation, and where is that increased taxation to come from?—An increase of taxation would only be necessary if the indirect benefits added to the direct benefits should be less than the amount of interest incurred for the capital employed in construction

828. You mean the indirect benefits to the revenue?—Yes

829. But now, including the indirect and the direct benefits to the revenue, many of the public works which have been constructed (without for a moment disputing their usefulness) have not paid?—Certainly, I am only speaking of what under more careful supervision and greater care in undertaking them, might be anticipated in the future if the annual expenditure were only from 2,000,000 *l.* to 2,500,000 *l.*

830. Then I understand you to admit that even expending the limited sum which you recommend, which I take to be about 2,000,000 *l.* a year, and upon the strict condition that it should be all raised in India, there is even with that limitation a certain risk in the present financial condition of India?—There is certainly a risk that you may not obtain directly the full amount of interest for it; how far undertaking such works might prevent famine, or, if famine occurs, to what extent the works constructed might facilitate famine relief, I am unable to say, but I should think it probable that the direct receipts from the works and the indirect benefits might reasonably be expected to be equivalent to the interest upon the capital spent in their construction.

831. You would admit, would you not, indeed I think you have already admitted it, that there are many public works in India which it would be extremely desirable to carry out if India had a surplus revenue?—Certainly.

832. That being the case, would it not be possible to confer upon her the advantage of constructing those public works out of the surplus revenue by reducing the expenditure?—It might be

833. Could you indicate (because it occurs to me to be most intimately connected with the question to what extent public works could be carried out) your opinion whether the expenditure could be reduced?—With regard to Public Works Expenditure, that could be reduced; there is a difficulty, no doubt, in reducing the general expenditure in India, but I think it is worthy of consideration whether the military expenditure might not be reduced.

834. Having indicated your opinion that it was worthy of consideration whether the military expenditure is capable of reduction, is there any other branch of expenditure in the administration of India which you think is capable of reduction?—The military expenditure is that which I think it right to mention in evidence upon such an occasion as this, I am not able to indicate any other branch, as I have not prepared myself for any inquiry on the subject.

835. Then in confining your remarks to the military

Evidence of Sir THOMAS LAWRENCE SECCOMBE, K C S I., C B., 21 March 1879—*continued.*

Mr Fawcett—continued.

military expenditure, do you do that because of the large proportion of the revenue of India which is absorbed in the military expenditure, or because you have specially devoted your attention to that branch of expenditure?—In regard to the Home Military Charges, I have been often engaged in inquiries with regard to the possibility of reducing them. Papers on the subject have been laid before the Houses of Parliament, and having been a member of several Committees on the military expenditure, I am of opinion that it is desirable to consider whether it might not be reduced.

836 Then you have devoted special attention to this subject?—Yes, more especially to the Home Army Charges.

837 Has the result of your deliberations been published anywhere?—The Reports of the Committee on the Home Army Charges, of which I was a member, were laid before the House of Commons, and printed as a Return, and formed the subject of inquiry before a Select Committee of the House of Commons in the year 1874.

838 I may presume that your opinions, without asking what they are as to the reduction of military expenditure, are the same now as were expressed before that Committee?—In regard to the charges which were then in question, certainly.

839 Do you think that the Establishment Charges with regard to public works are capable of great reduction?—I am unable to give an opinion upon that point.

840 But it is obvious that if, as you recommend, only 2,000,000 £ are spent, instead of 4,000,000 £, as have been spent, it would be necessary to reduce the establishment charges?—Certainly, the establishment charges should be reduced in proportion to the expenditure to be incurred.

841 With regard to the Famine Fund, if 750,000 £ a year is transmitted from this fund to England to reduce the debt, of course there would be no advantage in doing that, if at the same time money is being borrowed in England, it would simply involve the fallacy of the old sinking fund, and you would be putting money into the one pocket which you were taking out of the other?—Certainly, the object of sending that money to England would be to repay to the Home Treasury the advances which had been made from it, and so to render it unnecessary to apply to Parliament to obtain further power to borrow here. If our circumstances required that we should borrow again in this country there would, under existing circumstances, be no option but that of asking Parliament to allow us to borrow.

842 In your statement of the amount of money which has been raised by loans in England and India during the last six years, have you included what may be described as the Floating and Unfunded Debt?—Yes.

843 In addition to the permanent debt the Indian Government have obtained temporary loans, have they not?—Yes, but only for short periods.

844 But during the present year a not inconsiderable sum has been advanced to them by the Bank of England, has it not?—Yes, at one time

Mr Fawcett—continued.

we owed the Bank 1,500,000 £; at present we have about 1,000,000 £ outstanding.

845 And that million is included in the figure you have given?—That 1,000,000 £ is included.

846 Is there not a statement made to the effect that the Indian Government have used the capital of certain funds, such as the Civil Service Pension Fund?—The capital of the military funds was accumulated to meet the pensions of widows and orphans. When the Government took over the military funds they were in a very unsatisfactory condition, although they had a large amount of capital. The Mutiny had greatly increased the charges upon them, and the Government undertook to relieve the funds of those pensions which resulted from the losses consequent upon the Mutiny. We then held about 3,500,000 £ of capital on account of these funds, and when their assets and liabilities were made over to the Government we had to determine what we should do with the capital, whether we should write it off in one year as an extraordinary receipt, or apply it as long as it might last in aid of subscriptions on account of the funds in order to meet the pensions; and after much consideration the latter was considered the best plan of dealing with it. Therefore, year by year, a certain sum has been taken from the capital to make up the difference between the subscriptions and the amount of the pensions.

Mr Sampson Lloyd.

847 May I ask what the subscriptions are?—The subscriptions are payments by the officers to provide pensions for their widows and orphans;

Mr Fawcett.

848 But you have adopted a different plan with regard to the civil funds, have you not?—Yes, we have adopted a different plan with regard to the civil funds, because when we took over the military funds, we closed them to any fresh entries, and thought it better to institute another fund which should be entirely self-supporting for military officers, and therefore we applied the capital towards paying pensions which would be gradually reduced until they expired. In regard to the civil funds, when we took over the capital it was only at the close of certain measures which greatly increased the annuities to civil servants, and that being an increasing instead of a decreasing charge, it was thought that it would be unwise to treat the capital in the same way as we had treated the capital of the military funds; and it was written off at once as an extraordinary receipt of the year, but not brought into account as revenue, or as showing any surplus.

849 Then really that capital, looking upon it as a financial transaction, has been used?—The capital of the civil funds being so treated, the debt was reduced to a corresponding extent.

850 Then really that ought practically to have been added to the amount, you have used that fund, and therefore it ought to be added to the common revenue?—We did not use the money. It was simply that the deposits were reduced by a corresponding amount. There are transactions every year, on account of deposits

of

Evidence of Sir THOMAS LAWRENCE SECCOMBE, K.C.S.I., C.B., 21 March 1879—continued

Mr. Fawcett—continued.

of different institutions, of which we render an account to Parliament, but they do not enter into any revenue or charge account. It is merely that as bankers to certain institutions we hold less money in our hands.

851 To show the actual returns of public works you really want two returns—the first to show how much borrowed money has been spent upon the construction of public works, and then, in order to exhibit it as a commercial transaction, to allow for the compound interest during the construction, or during the period in which the works have not paid?—Certainly.

852 That last return would represent the commercial results?—It would.

853 Such a return as that has not yet been made up?—No, we are not in a position to do that at present, because we have not the information.

854 All your borrowing power in England now has been exhausted, has it not?—Very nearly.

855 And, besides that, you have incurred a liability to the Bank of 1,000,000 l.?—That is within our borrowing powers. We have not exceeded them, if that 1,000,000 l. be included.

856 But then you had exceeded it when you borrowed one and a half millions from the Bank?—No, we had then the power, and then we paid off the 500,000 l., power to borrow to that extent reverted to us, and we have availed ourselves of it for part of the amount.

857 But now your position is such that if you require to borrow more money in India you must come to Parliament?—We must come to Parliament for power to borrow in England.

858. I understand that you advocate very strongly the policy of borrowing money in India instead of in England, both on financial and political grounds?—I do.

859. The financial grounds being in order to avoid the risk that must be run of receiving your revenue in one coin and having to make your payments in another, and the political grounds being the desirability of giving the natives a greater stake in the country?—Yes, thereby giving the natives a greater stake in the country, and putting an end to the very mistaken idea that a tribute of 15,000,000 l. or 16,000,000 l. is paid annually by the people of India to this country, which is, in my opinion, a misapplication of terms.

860 But you recognise the importance of diminishing, as far as possible, the amount which India has to transmit to England; you consider that this loss by exchange has arisen partly from these large remittances?—I do, and I consider that every million added to the remittance above a certain sum has an effect upon the exchanges beyond the mere proportion which you add to the amount.

861 Will you explain to the Committee what you mean by that?—I think you may remit, say 10,000,000 l. for example, perhaps at a tolerably good rate of exchange; if you add 3,000,000 l. to that, you get a rate of exchange more unfavourable, and if you add another 3,000,000 l., the exchange is more unfavourable still. I think that the demand for bills on India will bear a certain amount being annually placed 0.61.

Mr Fawcett—continued

on the market by the Secretary of State, but if you go beyond that amount the rate obtained for the whole remittance is reduced in a greater ratio than the addition represents.

862. Then you consider that that occurs with regard to bills which has been again and again observed as occurring with regard to commodities, you increase the supply, and up to a certain point an increased supply only produces a certain limited effect in depreciating the value or the price, but when you make a certain increase beyond that you soon get to a point when no more of the article can be taken, and then you produce a much greater depreciation in prices?—That is quite what I mean.

863 Therefore you think that the amount of bills which have to be sold has arrived at that point at which the adding of 1-16th to the amount of bills which have to be sold, would lower the prices disproportionately over the whole 15,000,000 l.?—I do think so.

Chairman.

864. There are some answers which you gave to questions put by Mr. Fawcett which I think, unintentionally, conveyed an impression which might seem something like a reflection on the Indian Government; Mr. Fawcett asked if it were not the case that the Secretary of State had laid down a certain policy which he had been unable to get the Indian Government to carry out, would it not be rather more accurate to say that he had laid down certain principles to comply with which it was necessary for works to be constructed by loan to be sanctioned, it was principles not policy which he laid down?—I referred especially to the necessity for compliance with the instructions of the Secretary of State relative to borrowing in this country.

865. But as regards the question of complying with the conditions laid down by successive Secretaries of State as to public works extraordinary, the Indian Government accepted those principles, and if they failed, they failed from the great difficulty of putting them into practice?—I would by no means wish to convey to the Committee that the Government of India were, in my opinion, in any way open to reflection in regard to this matter, no doubt they are as zealous as we in England can be, to do what is best for the public interests, but they have taken a different view. They, entertaining a belief in the soundness of a forecast system, would proceed with the construction of productive works by means of borrowed money more rapidly than the Secretary of State would desire, but they do not consistently entertain that view, as I showed the Committee yesterday by an extract from one of their Despatches. They recognised in that Despatch the necessity of adopting the course which the Secretary of State had prescribed, but at another time, no doubt under the pressure of other circumstances, they advocate the adoption of the principle of the forecast system, and ask that they should be allowed to proceed with productive works so long as the works do not involve a greater annual cost than at present.

866 Some years ago there was, I think, a much more sanguine view of the returns likely

Evidence of Sir THOMAS LAWRENCE SECCOMBE, K C S I., C B, 21 March 1879—continued

Chairman—continued.

to be obtained from irrigation works than is at present held?—There was

867 Could you furnish the Committee with a Return which was presented to Parliament some 10 or 12 years ago, giving as a per-centage the probable result of the expenditure upon irrigation works in different parts of India?—I will furnish that Return.

868 One part of our inquiry has not been brought before you with a view of eliciting your opinion, and that is as to how famines are in future to be prevented, we have had certain gentlemen before us who have expressed a strong opinion that the only way to prevent famine was to incur an almost unlimited expenditure in the making of irrigation works, which would you prefer to do to carry on the prosecution of public works within the limits already prescribed by you, and, when a famine occurs, endeavour to meet it out of the general resources of the Government of India, or would you attempt to forestall famine by creating all over India irrigation works, with a view to giving the whole population immunity from drought?—I think that the latter plan would be a continuation of the system which has been found to work unfavourably. I think the wiser system would be, to construct such productive public works as can be made in India by the expenditure of 2,000,000*l*, or 2,500,000*l* a year, and for the Government of India to employ 750,000*l* of the Famine Insurance Fund, in the construction of works tending to the mitigation or prevention of famine.

869. Then you would prefer to husband your resources and carry on the public works to a certain degree, and then, when famine breaks out endeavour to meet it out of the general revenues of the Government of India?—Yes, rather than undertake a variety of expensive works, which would certainly cost a very large sum of money, and which might in the end prove not to be effectual for the object in view

870. That is to say, works the cost of which was certain, and the return from which would be uncertain?—Certainly

871 Is there not one peculiar danger to which Indian finance is liable, namely, that when a famine breaks out, which has to be met by a great expenditure, there is pressure brought by public opinion to embark immediately upon a wholesale scheme for the prosecution of irrigation works?—There is, on the occurrence of the famine in 1873-74 it was stated in some of the public newspapers that the Viceroy would be

Chairman—continued.

held responsible for the death of every native which followed as a consequence of the famine. There can be no doubt that such an expression was mischievous.

Mr Cross.

872. I think you said that an excessively large issue of Council drafts caused a considerable fall in the exchange?—It causes a fall in the exchange. The fall in recent years is, I believe, attributable to several causes, and one cause is the increase of the amount of Council drafts

873. Which has also, you would say, contributed to the fall in the price of silver?—No doubt they act and re-act on each other

874. The Indian Government being the largest bullion dealers in the world at present?—They are, practically, very large dealers.

Mr Onslow.

875. Could you tell the Committee how much is the estimated loss by exchange, if the price of silver falls 1*d* per ounce, that is to say, for every 1*d* how much does the Government of India lose?—There are 444 grains of fine silver in an ounce of standard silver, and 165 grains of fine silver in a rupee, therefore when a fall of 1*d* an ounce occurs in standard silver, the value of the fine silver in a rupee is reduced to the extent of about one-third of a 1*d*, being 3716 of a 1*d*.

Mr Fawcett

876 Of course, what would make a more favourable exchange for India, and what would tend to raise the price of silver, the two being intimately connected, would be if anything occurred to increase the export trade from India, because in that way you would increase the demand for silver?—Certainly.

877 I do not think it has been quite ascertained whether the export trade would be likely to be increased if the export duty were repealed?—There would then be a reduction in the price at the port of embarkation.

878 And, therefore, there being a reduction in the price, there would be an increase in the demand, and consequently the demand for silver for remittance would be increased?—No doubt, if the increase in the demand should exceed the reduction in price

879. That has generally been the case when export duties have been repealed, has it not?—Not invariably, I think, but it is a natural consequence.

Appendix, No. 15.

PAPER handed in by Mr. Wood, and referred to in his Evidence, 5 April 1884,
Q. 2278.

MEMORANDUM elucidating Object in placing accompanying Tables before
Select Committee.

1 Mr. Goschen's Silver Committee's Report (1876) demonstrated that the fall in silver was due to the cessation of the guaranteed railways payments of capital in London, which, by providing a set-off to the Secretary of State's drafts, had previously averted "loss by exchange," and favoured the flow of silver into India.

2 This demonstration checked the "silver scare" to some extent; but the Select Committee of 1878-79 was still partly under that influence, and the policy it recommended, by discouraging liberal expenditure from loans taken up in England on *productive* public works (including railways), tended to perpetuate the excessive "loss by exchange," and, by leaving the Secretary of State's drafts to swell without the set-off that such loans would have provided, thus kept India short of the regular supply of silver needed for its currency, depressed prices, and checked the internal trade and industry of India.

3. The popular, and, to some extent, officially held, assumption that it is disadvantageous for India to borrow in *England*, is due to overlooking the factor of large and immediate relief secured by supplying a considerable portion of the Secretary of State's inexorable annual requirements by loans, the proceeds of which, being utilised for *productive* public works in India, afford a tangible basis for control of the interest-charge of debt.

4. These Tables are offered as presenting in popular form the bases of full reply to the assumption named in paragraph 3 above.

5. Mr. Westland has demonstrated the *exhaustion of floating capital* available in India for public loans, but, so far as I have seen, his evidence did not bear so much on the *affirmative side* of the argument in favour of taking up loans in India as these Tables are intended to do.

ESTIMATES showing the Advantage of taking up INDIAN LOANS in England instead of in India.

682 APPENDIX TO REPORT FROM THE

The Estimates set out below are intended to elucidate the following Propositions.—

- 1.—That a Higher Rate of Subscription can be obtained for Indian Loans raised in England on which the Interest is paid in London.
- 2.—That such Loans can be raised at a Lower Rate of Interest than in India.
- 3.—That the diminution in the obligatory remittances from India (i.e., reduction on the Secretary of State's Drafts) obtained by the amount of such Loan in any year is equivalent to a Direct Gain by Reduction *pro tanto* of "Loss by Exchange."
- 4.—That these advantages are more than sufficient to Compensate for cost of Remittance of Interest to England on such Loan, and even for cost of remittance of Principal on efflux of such Loan.
- 5.—That when such Loans are applied to Productive Public Works, the Gain to India is largely increased over and above the financial advantage of borrowing in the cheaper Market.

<i>Results of 1,000,000 l. borrowed in England for Reproductive Works in India, 1876 (i.e., Loan repaid in 25 years, compound interest on both sides).</i>	
<i>Dr</i>	£
To interest for 25 years at 4 per cent. - - - -	1,686,840
To transmission of interest at (exchange) 16 per cent., during 25 years - - - -	266,680
To principal repaid - - - - -	1,000,000
To cost of its transmission at 12 per cent. in A D 1901 - - - -	120,000
To profit to India from transaction - - - - -	1,454,480
	£ 4,508,960
<i>Cr</i>	
By present saving of "loss by exchange" at 16 per cent. in lessening Council bills by one million for the year - - - -	160,000
By interest on that sum for 25 years at 4 per cent. - - - -	266,680
By works constructed - - - - -	1,000,000
By profits on Reproductive Works (after three years spent in construction) at 6 per cent. = 60,000 l., annuity accumulation on that sum at 6 per cent. - - - - -	= 3,080,480
	£ 4,508,960
By balance brought down—	
<i>i.e.</i> , Works worth - - - - -	1,000,000
Profits available for other works - - - - -	454,480
	£ 1,701,960

<i>I.—Gained by taking up Loan, 3,000,000 l. (or the equivalent thereof) in India instead of in England, 1876-79.</i>	
1 Avoidance of Loss by Exchange on remittance of interest (120,000 l.) to Europe (30,487 l.) at 1-8½ x 15 years - - - - -	£ = 307,300
2 Saving in annuity interest on above yearly remittances - - - - -	= 389,660
3 Avoidance of cost of remittance at 1-8½ of principal 15 years hence - - - - -	= 519,100
	£ 1,206,060
<i>II.—Gained by taking up Loan in England instead of in India.</i>	
1 Higher rate of subscription for loan in England than in India at 6 per cent. - - - - -	180,000
2 Saving of "Loss by Exchange" accruing from diminution of Council drawings 3,000,000 l. at 1-8½ during current year - - - - -	612,100
3 Compound interest on above items - - - - -	= 664,400
4 Half per cent. less interest paid in England than in India, 15,000 l. x 15 years - - - - -	= 225,000
5 Annuity interest on this yearly saving - - - - -	= 285,360
6 Estimated saving (of ¼ d. in rupees) on exchange in drawings for 14,000,000 l. - - - - -	300,000
7 Compound interest on ditto - - - - -	240,280
	£ 2,207,180
<i>Deduct—</i> Cost (at 1-8½) of remitting principal if repaid on efflux of Loan - - - - -	512,100
	£ 1,785,080
<i>Gain—</i> Shown on taking up loan in England - - - - -	£ 575,970

<i>"What was not seen" by the Finance Minister, i.e., in favour of borrowing in England, 1881-82</i>	
<i>Dr</i>	£
(a) To probable premium on 3,000,000 l. at 8½ per cent. stock taken up in London at 103 - - - - -	90,000
(b) To interest on that sum at 3½ for 15 years - - - - -	60,790
(c) To half per cent. less annual charge than in India, with interest thereon during the period - - - - -	273,450
(d) To improved price of Council bills during 1881-82 (on 14 instead of 20 crores) - - - - -	666,666
(e) To interest on that sum for 15 years - - - - -	450,280
(f) To better rate on excess of outward over inward mercantile and private remittances (taking only ¼ d per rupee) on 25 crores - - - - -	520,890
(g) To interest on - ditto - ditto - at 3½ - - - - -	851,760
	£ 2,413,798
<i>"What was seen" by the Finance Minister, i.e., in favour of borrowing in India.</i>	
<i>Cr</i>	
(A) By premium at 1 per cent. on three crores taken up in India - - - - -	30,000
(B) By interest for 15 years on above at 4 per cent. - - - - -	24,080
(C) By saving cost of annual remittance of interest on 3,000,000 rupees at 1 s. 8 d. - - - - -	400,470
(A) By Saving cost of remitting principal (3,000,000 l.) at 15 years' end, exchange at 16 per cent. - - - - -	480,000
Balance—being debit against the Hon. E. Baring and India - - - - -	1,479,226
	£ 2,413,798

W. Martin Wood,
Formerly Editor "Times of India," and of "Bombay Review," also
Examiner in Political Economy for University of Bombay

Appendix, No. 16.

PAPERS handed in by Mr Waterfield, 13 June 1884

ABNORMAL CHARGES from 1871-72 to 1882-83.

	1871-72	1872-73.	1873-74.	1874-75	1875-76.	1876-77	1877-78.	1878-79	1879-80	1880-81	1881-82.	1882-83.	TOTAL
	£.	£.	£	£	£.	£.	£.	£	£	£	£.	£.	£.
State Railway Capital - -	2,816	10,888	32,706	105,193	66,370	27,987	71,204	230,850	471,410	77,003	247,673	467,176	1,801,380
Frontier Railways - -	-	-	-	-	-	-	-	-	1,834,330	2,293,615	324,608	359,500	4,112,147
Famine Relief - -	-	-	3,804,700	2,348,023	601,966	3,145,431	3,345,868	318,420	103,990	34,480	34,849	23,103	14,709,841
War Expenditure, Afghan istan - -	-	-	-	-	-	-	-	-	4,768,124	8,070,868	1,014,341	17,860	11,840,034
War Expenditure, Egypt - -	-	-	-	-	-	-	-	-	-	-	-	699,250	699,250
Commission for Reduction of Debt - - - -	-	-	-	-	-	-	-	-	-	-	715,151	1,343,555	2,058,706
Protective Railways and Irriga- tion - - - -	-	-	-	-	-	-	-	-	-	-	720,000	134,342	854,342
TOTAL - - - £	2,816	10,888	3,807,473	2,348,115	665,345	2,172,718	5,417,370	534,270	4,673,674	10,473,969	337,314	2,944,308	30,103,500

FAMINE RELIEF and INSURANCE, 1881-82 to 1884-85.

	1881-82	1882-83	1883-84 (Revised Estimate)	1884-85 (Budget Estimate)
	£	£	£	£
Famine Relief - - - -	34,849	23,103	10,000	-
Protective Works, Railways - - -	614,551	129,101	625,900	*1,138,600
Protective Works, Irrigation - -	135,449	265,448	291,000	310,100
Reduction of Debt - - - -	715,151	1,343,555	573,100	301,300
£	1,500,000	1,500,000	1,500,000	*1,750,000

* Includes a special addition of 250,000 £. made by the Government of the North-West Provinces for the Railway from Jhansi to Manikpur.

PER-CENTAGE on Capital Outlay, of Net Earnings of certain RAILWAYS,
Five Years after their Completion

RAILWAYS	Present Length, Open	Year in which Completed, or nearly Completed	Number of Miles then Open.	Fifth Year from Completion.	NET EARNINGS	
					Per-centage in Fifth Year	Per centage in 1882
East Indian	1,506½	1867 (completion of Jubbulpore Line) 1871 (completion of Chord Line)	1,356 1,503½	1872 - 1876 -	5.23 7.12	8.56
Bombay, Baroda, and Central Indus	438½	1872 - - -	389½	1877 - -	3.50	5.69
Eastern Bengal	160	1871 - - -	157	1876 - -	5.80	10.23
Great Indian Peninsula	1,288	1870 - - -	1,258½	1875 - -	4.77	7.29
Madras	861½	1873 - - -	858	1878 - -	1.44	2.25
Oudh and Rohilkund	546½	1874 - - -	540½	1879 - -	3.29	2.80
Sind, Punjab, and Delhi	663½	1870 - - -	666½	1875 - -	1.94	2.84
Indus Valley	501	1878 - - -	501	1883 - -	1.94 (in 1882)	1.94
Rajputana Malwa	1,116½	1880 - - -	972½	1885 - -	5.57 (in 1882)	5.57
Wardha Coal	46½	1877 - - -	46½	1882 - -	1.10	1.10
Calcutta and South Eastern	43	1863 - - -	28	1868 - -	0.96	0.08
Northern Bengal	280	1878 - - -	232	1883 - -	5.23 (in 1882)	5.23
Tirhoot	85	1877 - - -	79	1882 - -	3.23	3.23
Patna Gaya	57	1879 - - -	57	1884 - -	5.43 (in 1882)	5.43
Hathras Muttra Achnera	52	1875 - - -	29	1880 - -	5.30	2.69
Burma	161	1877 - - -	161	1882 - -	4.74	4.74
Nizam's	121	1874 - - -	121	1879 - -	0.77	3.07

FAMINE RELIEF, 1873-74, to 1882-83.

	£.		£.
1873-74	3,864,706	1880-81	34,469
1874-75	2,242,922	1881-82	33,949
1875-76	601,966	1882-83	22,103
1876-77	2,145,431		
1877-78	5,345,985		
1878-79	313,420	Average of 10 years	£. 14,709,841
1879-80	103,990		

STATEMENT showing a Distribution of the CHARGE for ' EXCHANGE ON TRANSACTIONS with London ' in 1882-83, over the TRANSACTIONS in England during that Year

	Transactions in England	Distributions over Transactions in England		TOTAL.
		Charge for Exchange on Bills and Transfers	* Other Exchange Debits and Credits	
DISBURSEMENTS.				
RAILWAYS.	£	£	£	£.
Guaranteed Interest, Annuities, and Interest on Debt - - - - -	4,374,430	1,116,160	-	5,992,590
Interest advanced to Subsidized Companies -	9,991	2,292	-	12,283
Stores, &c for Frontier Lines - - - -	78,302	17,962	-	96,264
Ditto - - State Lines - - - -	370,114	84,908	-	455,017
Ditto - - East Indian - - - -	453,901	104,122	92,258	650,281
Ditto - - ⁴¹ Southern Mahratta - - - -	130,372	30,021	118,968	279,361
Guaranteed and Subsidized Companies Net Payments out of Capital - - - -	264,787	60,649	138,915	464,351
	6,181,997	1,418,109	117,210	7,482,896
Interest on Debt Ordinary - - - -	2,478,321	568,555	-	3,047,076
Retired Pay, Pensions, &c., Civil and Military -	3,505,679	804,173	-	4,309,852
Other Army Charges - - - - -	1,712,377	392,808	-	2,105,185
Other Disbursements - - - - -	1,759,382	403,590	40,188	2,122,784
	15,637,956	3,587,240	157,398	19,082,798
Grants in Aid of Expeditions to Afghanistan and Egypt - - - - -	1,000,000	229,393	-	1,229,393
Net Disbursements (excluding Debt transactions) -	14,637,956	3,357,847	157,398	17,853,405
But for Debt transactions and the remittance from India of 1,001,393 l on account of the Commission for the Reduction of Debt, the Balance would have been reduced by - - - - -	518,828	110,016	-	637,844
TOTAL - - - £	14,119,128	3,238,831	157,398	17,200,561
	£ 3,061,433			

* These Debits and Credits, with the exception of the Credit in respect of the East Indian Railway, do not relate directly to the sums recorded as "Transactions in England" over which they are here distributed, and the Debit in respect of the Southern Mahratta Railway is almost entirely the loss incurred on Transactions in India

Thomas W Keith, Accountant General.

**STATEMENT of the NET DISBURSEMENTS of the HOME TREASURY of the GOVERNMENT of INDIA
from those on other Accounts), and of the Mode**

	1867-68	1868-69	1869-70	1870-71	1871-72	1872-73	1873-74	
	£	£	£	£	£	£	£	
INTEREST on DEBT * - - - -	2,147,888	2,159,247	2,210,089	2,356,551	2,438,063	2,464,287	2,499,118	1
Management of Debt † - - - -	14,596	15,734	16,446	18,107	18,725	18,070	17,987	2
TOTAL Debt Charges - - - - £	2,162,484	2,175,081	2,226,535	2,374,658	2,456,788	2,482,357	2,517,105	3
ARMY British Forces Effective - -	745,232	695,450	790,375	659,295	591,715	659,774	567,921	4
British Forces Non Effective - -	220,500	217,000	217,000	239,562	479,974	371,695	294,050	5
Passage - - - - -	578,815	435,708	284,668	311,652	271,374	329,996	381,506	6
Furlough - - - - -	237,940	267,065	402,885	469,014	437,778	423,127	£ 26,129	7
Miscellaneous - - - - -	39,882	14,346	9,001	7,719	£ 23,468	£ 669	12,077	8
Stores - - - - -	752,063	872,621	878,491	829,732	995,790	811,795	852,695	9
Superannuations - - - - -	915,628	828,417	972,897	900,644	892,831	907,956	966,273	10
† Provident Funds, Military and Medical - - - - -	8,490,060	8,260,611	8,496,317	8,517,638	8,586,934	8,503,020	8,327,152	11
- - - - -	397,477	443,469	471,516	496,287	513,523	518,508	526,740	12
TOTAL, Army - - - - £	9,887,537	9,704,080	9,966,838	4,013,905	4,100,457	4,021,528	8,853,892	19
CIVIL SUPERANNUATIONS								
Civil Annuities, Unconventanted and Marine Pensions - - - -	324,421	291,777	298,829	292,508	288,017	295,691	317,448	14
Miscellaneous (except Military) - -	328,588	234,275	236,531	244,523	207,872	233,207	204,378	15
Provident Funds, Civil and Naval - -	130,565	120,162	131,774	* 123,699	144,524	142,560	146,369	16
TOTAL, Civil Superannua- tions - - - - £	673,574	646,214	667,134	660,730	640,413	671,458	668,185	17
MISCELLANEOUS Home Administration (except Management of Debt) - -	185,377	193,217	196,842	197,987	187,231	186,988	188,242	18
Stores (except Military and those for Railways and Irrigation) - - - -	396,213	758,251	672,316	607,885	366,246	444,819	602,601	19
Furlough Civil, Unconventanted, and Marine - - - - -	100,889	124,531	160,671	177,268	174,434	157,006	£ 311,027	20
Miscellaneous - - - - -	146,854	401,867	305,867	402,989	349,843	411,395	226,764	21
Remittance Transactions - - - -	532,522	663,514	500,710	589,837	556,963	895,078	463,618	22
TOTAL, Miscellaneous - - - - £	1,368,805	2,140,980	1,736,996	1,975,966	1,544,216	1,695,286	1,791,252	23
TOTAL, except Railways and Irrigation - - - - £	8,087,370	8,666,805	8,596,842	9,019,359	8,741,974	8,770,629	8,764,384	24
RAILWAYS and IRRIGATION								
Guaranteed and other Companies								
Payments out of Capital - - - -	4,611,809	2,414,591	3,202,900	5,361,418	2,540,118	1,494,391	1,270,283	25
Receipts on Account of Capital - -	3,472,232	6,502,505	5,088,825	7,630,077	3,735,723	965,769	1,327,836	26
Net - - - - £	1,139,577	4,087,916	1,686,583	1,666,569	1,199,503	528,622	£ 27,558	27
Interest and Annuity - - - -	3,494,317	3,908,197	4,127,906	4,352,713	4,546,236	4,619,249	4,631,531	28
Purchase of Railway and Irrigation Undertakings - - - - -	- - -	346,162	1,044,198	11,067	- - -	- - -	- - -	29
Stores - - - - -	- - -	- - -	123,435	88,209	111,021	296,938	1,022,050	30
TOTAL, Railways and Irriga- tion - - - - £	1,139,577	166,435	3,409,014	2,138,330	5,461,552	5,444,304	5,576,037	31
TOTAL, Net Disbursements - - £	6,721,264	8,832,740	12,006,856	11,152,689	12,203,626	14,215,433	14,340,421	32
Remittances by Bills, Transfers, and Bullion - - - - -	4,257,035	3,705,741	6,980,122	9,014,702	10,310,339	14,342,135	13,285,678	33
Repayments by Imperial Government for Expeditions - - - - -	84,552	4,288,832	1,354,124	127,620	- - -	50,651	51,479	34
Debt Incurred or Discharged - - -	1,163,907	1,031,639	3,536,112	2,425,856	1,408,406	- - -	18,458	35
Balance Decreased or Increased - -	1,265,770	929,972	133,498	419,259	484,881	777,313	984,806	36
TOTAL - - - - £	6,721,264	8,832,740	12,006,856	11,152,689	12,203,626	14,215,433	14,340,421	37

* Exclusive of interest on debt incurred in connection with the purchase of the East Indian Railway, included under " Railways and Irrigation."

† This includes the charge for the management of part of the debt referred to in the previous note, which could not be readily separated.

in each of the undermentioned Years (those in respect of RAILWAYS and IRRIGATION being shown separately by which the DISBURSEMENTS were provided for.

	1874-75	1875-76	1876-77	1877-78.	1878-79.	1879-80	1880-81	1881-82	1882-83.	1883-84, subject to Audit, &c	1884-85, Budget Estimate.
	£	£	£	£	£	£	£	£	£	£	£
1	2,178,186	2,158,349	2,299,802	2,480,881	2,580,587	2,586,929	2,899,388	2,509,719	2,478,821	2,440,091	2,416,700
2	21,166	18,385	20,888	20,984	20,556	21,988	32,190	27,764	28,174	27,385	29,000
3	2,199,302	2,176,734	2,320,690	2,511,865	2,611,148	2,608,867	2,871,578	2,537,483	2,506,695	2,467,374	2,439,700
4	510,779	454,384	550,548	641,092	714,700	743,837	759,748	615,017	604,342	586,097	600,000
5	309,851	350,460	368,730	648,841	650,000	645,085	650,000	729,218	731,230	1,827,177	828,000
6	392,860	266,734	317,162	239,846	825,518	520,651	302,317	809,397	383,192	338,547	266,900
7	221,953	209,345	209,703	203,448	184,472	182,323	176,003	215,972	182,274	162,012	185,000
8	8,046	§ 7,822	22,409	19,386	8,289	§ 5,348	9,270	20,830	61,059	26,292	—
9	1,124,844	1,094,947	1,129,040	1,154,460	772,772	875,286	789,082	675,697	682,510	535,080	500,900
10	1,124,915	1,106,510	1,305,208	1,330,217	1,284,965	1,467,642	1,407,679	1,476,291	1,488,298	1,499,550	1,545,900
11	8,592,448	8,478,048	8,902,888	4,221,285	3,985,116	4,109,406	4,088,049	3,942,222	8,931,908	4,970,005	9,926,100
12	549,510	554,998	568,844	565,928	598,680	588,619	589,941	586,426	599,135	608,777	609,000
13	4,136,968	4,081,046	4,471,032	4,777,208	4,528,696	4,783,225	4,677,990	4,828,648	4,531,040	5,573,782	4,535,100
14	828,729	853,168	494,173	468,259	487,819	499,138	593,723	614,950	520,196	528,249	530,500
15	194,868	215,330	185,904	188,943	202,950	185,214	205,677	172,517	160,208	208,428	158,500
16	148,279	159,404	168,841	171,920	177,869	182,160	213,264	208,945	206,747	202,750	202,900
17	671,891	730,902	798,918	829,122	868,138	869,512	950,654	891,412	881,152	939,427	891,900
18	187,768	198,984	205,065	193,303	200,532	194,270	190,926	190,558	199,840	197,892	199,400
19	621,689	671,349	678,009	476,261	486,940	499,967	476,301	851,856	650,107	599,266	616,000
20	264,796	280,108	296,948	808,726	298,899	272,830	280,199	264,848	269,961	278,143	285,200
21	115,542	309,370	217,374	267,536	225,148	325,970	201,208	180,034	185,178	234,874	262,900
22	866,514	686,147	779,411	610,891	691,624	428,926	842,286	502,475	467,988	372,525	493,500
23	1,556,311	1,940,652	2,178,802	1,856,616	1,853,148	1,521,968	1,490,919	1,659,068	1,712,674	1,682,700	1,857,000
24	8,563,462	8,879,334	9,769,448	9,974,811	9,861,110	9,388,567	9,491,141	9,616,809	9,631,461	10,663,283	9,723,700
25	1,871,348	2,897,078	2,442,968	2,890,191	1,799,344	1,279,463	978,156	1,448,448	1,538,788	9,312,471	8,962,400
26	789,700	1,686,908	869,096	2,277,235	673,799	821,907	339,563	596,916	2,868,064	1,907,001	1,940,000
27	781,648	1,210,175	1,563,238	812,956	925,545	487,556	738,673	852,529	§ 1,289,266	405,470	1,122,400
28	4,659,755	4,655,996	4,686,751	4,695,474	4,799,259	4,786,859	4,641,654	4,911,395	4,918,234	4,826,753	4,865,200
29	83,800	4,280	-	-	-	-	-	-	1,404,154	13,786	202,600
30	1,040,056	736,631	608,468	1,137,665	682,506	802,449	1,774,859	1,266,330	890,602	1,170,295	1,700,000
31	6,666,269	6,607,082	6,848,457	6,196,095	6,347,909	6,046,664	7,155,085	7,080,854	5,878,624	6,415,304	7,890,200
32	15,128,721	15,486,286	16,617,899	16,110,906	16,308,419	15,930,431	16,646,226	16,647,463	15,510,065	17,078,587	17,513,900
33	10,841,614	12,389,619	12,696,799	10,134,455	15,464,758	15,748,757	15,239,677	18,489,096	15,318,021	17,779,763	16,670,000
34	-	13,903	-	-	415,122	2,050,000	500,000	500,000	1,000,000	1,000,000	500,000
35	5,069,839	1,906,299	5,716,168	4,369,141	369,897	706,144	2,764,191	2,229,473	6,029	4,946,664	4,400,000
36	782,332	1,876,471	1,794,068	1,637,310	44,366	1,432,463	1,257,643	1,506,240	808,965	664,499	1,543,900
37	15,128,721	15,486,286	16,617,899	16,110,906	16,308,419	15,930,431	16,646,226	16,647,463	15,510,065	17,078,587	17,513,900

‡ These totals correspond with the net "Army" charge, shown in the revised classification of the Accounts to 1881-83, and in the Accounts of the later years.

§ Prior to 1873-74 the furlough pay of all military officers is included under "Army," but from that year inclusive, the furlough pay of military officers in civil and public works employment, is included under miscellaneous furlough.

¶ In those cases the receipts exceed the payments by the sum printed in *Itasca*.

CAPITAL OUTLAY ON PUBLIC WORKS OF

WORKS	1864-65	1865-66	1866-67	1867-68	1871-72	1872-73	1873-74	1874-75	1875-76
	£	£	£	£	£	£	£	£	£
RAILWAYS, STAFF	594	207,357	136,613	4,07,818	1,138	1,124,82	9,42,401	33,793	1,22,211
Frontier	-	-	-	-	-	-	-	-	-
Protective	-	-	-	-	-	-	-	-	-
Last India	-	-	-	-	-	-	-	-	4
Eastern Bengal	-	-	-	-	-	-	-	-	3
TOTAL State Outlay	594	2,07,357	1,36,613	4,07,818	1,138	1,124,82	9,42,401	33,793	1,22,211
RAILWAYS Guaranteed Companies	1,190,411	3,507,927	4,749,861	3,776,270	2,496,728	1,77,245	1,09,033	1,087,011	9,15,066
Subsided	-	-	-	-	-	-	-	-	-
Southern Mahratta Company	-	-	-	-	-	-	-	-	-
TOTAL Outlay by Companies	1,190,411	3,507,927	4,749,861	3,776,270	2,496,728	1,77,245	1,09,033	1,087,011	9,15,066
TOTAL on all Railways	2,780,822	5,585,284	6,116,474	7,854,088	3,634,866	2,902,067	1,051,434	2,124,804	2,037,277
IRRIGATION AND NAVIGATION WORKS									
State	473,255	754,849	1,223,663	968,498	1,203,684	1,042,111	1,385,759	1,07,871	1,184,012
Protective	-	-	-	-	-	-	-	-	-
TOTAL State Outlay	473,255	754,849	1,223,663	968,498	1,203,684	1,042,111	1,385,759	1,07,871	1,184,012
Irrigation Company, Madras	186,182	163,003	210,000	5,000	12,000	-120,000	-68,000	-	-
TOTAL on all Irrigation Works	659,437	917,852	1,433,663	973,498	1,215,684	922,111	1,317,759	1,07,871	1,184,012
Madras Harbour	-	-	-	-	-	-	-	-	-
TOTAL Outlay on Railways and Irrigation and Navigation Works, and Madras Harbour	7,730,112	6,463,733	7,550,137	8,827,586	4,850,550	3,824,178	2,369,203	2,132,746	3,219,289
OTHER WORKS									
Military	2,025,485	2,432,018	1,652,613	1,600,974	94,074	756,640	711,840	6,700	813,070
Telegraph	207,000	312,600	1,00,000	90,000	20,000	148,415	94,020	98,065	1,11,640
Civil Buildings Roads	2,000,000	2,000,000	1,800,000	1,700,000	1,700,000	1,600,000	1,900,000	1,700,000	1,700,000
TOTAL Outlay on other Works	4,232,485	4,744,618	3,452,613	3,390,974	1,114,074	1,504,055	1,705,860	1,704,765	1,934,710
GRAND TOTAL	11,962,597	11,208,351	10,969,050	12,218,560	5,964,624	5,328,233	4,075,063	3,837,511	5,154,001
Figures excluded above									
Purchase of (1 Calcutta and South Indian Railway)	-	344,441	-	-	-	-	-	-	-
Purchase of Nalhati Railway	-	-	-	-	80,000	-	-	-	-
Purchase of East Indian Railway	-	-	-	-	-	-	-	-	-
Purchase of Eastern Bengal Railway	-	-	-	-	-	-	-	-	-
Purchase of Last India Irrigation Works	-	14,600	1,343,668	-	-	-	-	-	-
Purchase of Madras Irrigation Works	-	-	-	-	-	-	-	-	-

all kinds from 1867-68 to 1884-85

	1867-68	1871-72	1876-77	1879-80	1880-81	1881-82	1882-83	1883-84	Total of 17 Years	Average of 17 Years	Average of 15 Fiscal Years	Budget for 1884-85
	₹	₹	₹	₹	₹	₹	₹	₹	₹	₹	₹	₹
1	2,97,748	4,036,602	3,518,054	3,151,903	2,430,693	1,982,824	2,111,028	2,600,200	-	-	-	2,318,000
2	-	-	-	1,881,310	2,495,715	284,682	259,800	-22,507	-	-	-	-73,000
3	-	-	-	-	-	614,551	-129,101	625,900	-	-	-	1,138,000
4	-	-	-	154,218	418,435	435,262	148,197	238,900	-	-	-	540,000
5	-	-	-	-	-	-	-	-	-	-	-	100,000
6	2,593,110	4,058,362	3,548,775	4,640,501	5,312,773	3,177,319	2,303,624	3,316,100	4,192,012	249,871	3,818,141	4,024,000
7	715,450	1,323,984	1,012,623	419,560	434,700	672,445	410,873	1,064,000	-	-	-	1,382,000
8	-	-	-	-	-	170,000	338,270	318,000	-	-	-	50,000
9	-	-	-	-	-	-	-	710,968	635,900	-	-	950,400
10	715,450	1,323,984	1,012,623	349,560	444,700	842,435	1,460,111	2,048,500	31,400,334	1,864,725	1,027,079	2,438,000
11	3,608,007	5,950,716	4,861,761	4,960,061	5,777,463	4,010,734	3,858,735	585,100	74,534,906	4,364,312	4,815,293	6,467,000
12	1,117,200	1,102,037	1,347,101	877,349	911,700	950,050	917,448	1,101,100	-	-	-	1,248,000
13	-	-	-	-	-	155,419	202,443	291,000	-	-	-	300,000
14	1,197,202	1,102,037	1,347,101	877,349	911,700	1,685,400	1,240,889	1,394,100	18,807,807	1,111,518	1,107,711	1,580,000
15	-	-	-	-73,022	51	-	-	-	358,511	21,035	-2,774	-
16	1,117,202	1,102,037	1,347,101	883,727	911,817	1,084,499	1,240,891	1,394,100	19,254,418	1,132,613	1,105,207	1,558,900
17	-	-	2,00,896	137,874	138,059	68,000	40,895	-	634,003	38,471	78,920	-
18	4,755,050	6,452,383	5,807,818	5,901,660	6,937,330	5,174,150	5,144,434	6,979,200	94,441,727	5,555,906	6,029,359	8,021,100
19	659,631	629,698	656,059	508,468	451,948	504,265	458,911	400,000	-	-	-	500,000
20	1,80,038	60,875	69,600	54,181	89,803	104,661	154,373	210,100	-	-	-	201,700
21	1,250,574	1,113,763	1,265,267	1,159,000	1,087,960	1,910,788	2,118,607	2,096,000	-	-	-	1,300,000
22	2,584,106	1,812,836	1,084,200	1,712,040	1,019,717	2,510,717	2,781,500	2,010,100	10,918,117	2,718,718	2,110,011	2,903,000
23	7,350,000	8,290,219	7,802,113	7,701,811	8,407,056	7,001,870	7,876,490	5,505,000	140,659,844	8,274,169	8,271,303	10,124,000
24	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	6,70,614	-	(Redemption of an act) 76,300	460,000	504,000	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	1,03,000
28	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	1,762,882	12,800	-	-	-	-

Henry W at the
Fiscal Year 1884-85

Appendix, No. 17.

PAPERS handed in by Mr Cross (a Member of the Committee).

COPY of TELEGRAM from Viceroy, dated Simla, 22nd June 1884.

YOUR Financial Despatch, No 143, 27th May 1884. Direct financial result of Indian Railways We do not accept the calculations in the statement attached to the Despatch.

1 Loss by exchange has been wrongly shown in guaranteed capital transactions in England. There is no loss in such transactions.

2. Loss by exchange has been incorrectly shown on guaranteed capital transactions in India. The real loss on such transactions is the difference between the contract rate and the average rate of the year, and not between the contract rate and a rate of 2 s. per rupee Credit on account of revenue stores of Guaranteed Railways should not be shown in the statement. This entry cancels charge already made properly to revenue account.

3 Loss by exchange on capital transactions of East Indian Railway is wrongly shown, the transactions in England being brought to account at fixed rate of each year.

4 Amount of loss by exchange on capital transactions of State Railways is incorrect, as it includes loss on stores for Famine Railways.

5. Moreover, loss by exchange on State Railways should be added to the Capital Account, and interest charged.

6. We do not understand why Southern Mahratta Railway and Subsidized Railways have been included in the statement while Frontier and Famine Railways have been excluded. Loss and gain by exchange on Southern Mahratta Railway had better be excluded altogether, as these items have no real existence.

7. Taking productive works alone, we find total real loss for current year to have been 5 lakhs 76 thousands, and, including Southern Mahratta Railway and Subsidized Railways, to have been 24 lakhs 7 thousands, instead of 61 lakhs 10 thousands, shown in your statement.

As copy of your Despatch will be laid before Select Committee, we beg that copy of this telegram may also be laid before Committee, and that it be clearly pointed out that these figures show simply the effect of past policy in regard to railways on Indian finance, and not the true character of the railways as remunerative investments. We estimate that the Guaranteed Companies and East India Railway Company receive between 1,300,000 £ and 1,400,000 £ sterling in excess of 4 per cent. on their original capital.

A Despatch on the subject will follow.

TELEGRAM, 22 June 1884.	REMARKS.
<p>1. Guaranteed Railways: Loss by exchange has been wrongly shown in guaranteed capital transactions in England. There is no loss in such transactions.</p>	<p>1 There would be no loss on capital transactions in England if the sterling amount were withdrawn in the same year in which it is paid in, but it was paid in when exchange was at one rate, and withdrawn when exchange was at another, the Companies in both cases being credited or debited at the contract rates. Thus in each year there was either a gain or loss, as shown in Statement II., Columns 15 and 16.</p>
	<p>2. Loss</p>

2 Loss by exchange has been incorrectly shown in guaranteed capital transactions in India. The real loss on such transactions is the difference between the contract rate and the average rate of the year, and not between the contract rate and a rate of 2 s per rupee.

3 East Indian Railway

Loss by exchange on capital transactions of East Indian Railway is wrongly shown, the transactions in England being brought to account at fixed rate of each year.

4 State Railways:

Amount of loss by exchange on capital transactions of State Railways is incorrect, as it includes loss on stores for Famine Railways.

5 Moreover, loss by exchange on State Railways should be added to the Capital Account, and interest charged.

6 We do not understand why Southern Mahratta Railway and Subsidized Railways have been included in the statement, while Frontier and Famine Railways have been excluded

7. Taking productive works alone, we find total real loss for current year to have been - 5,76,000

And (including South Mahratta Railway and Subsidized Railways - - - - - 18,31,000)

Rs. 24,07,000

instead of 61,10,000 rupees shown in your Statement.

23 June 1884.

2 The statement in the Despatch showed the actual net amount in rupees received and paid in each year. This net sum in rupees is accounted for to the companies at the contract rates, and the difference between the amount of rupees paid by the Government, and that for which they account to the Companies, is the loss or gain. The average rate of remittances during the year does not enter into this calculation. Mr Westland explained the point in his answer to Q. 5106

3. It is true that the fixed rate differs slightly, from the actual rate of remittance, being fixed in advance. The statement shows correctly the receipts or payments up to date, but under the contract some of the payments will probably be recovered in future years.

4 See below (Note 6).

5 Major Conway-Gordon took this point, in his answer to Q 4396. To treat the loss by exchange on capital, and charge interest on it, is another way of stating the result; but the accounts are not prepared on that basis. It was, therefore, thought better to prepare the statement so as to show the actual payments year by year.

6 It would have been more correct to have included the whole of the transactions connected with the Famine, Frontier, and other State railways. The result would have been to have increased the net charge, as shown in the statement, of 41,06,42,329 rupees, by the following sums —

	State Railways Net Working Expenses in India.	Frontier Railways. Loss by Exchange on Capital Transactions in England.	Rs. 41,06,42,329
	Rs.	Rs.	
1879-80	- - -	4,33,463	
1880-81	- - -	14,02,440	
1881-82	- - -	7,67,633	
1882-83	11,330	1,76,165	
1883-84	-4,000	-	
1884-85	-12,400	-	
	12,070	26,59,660	26,10,000
	Making a Total Charge of Rs.		41,34,32,019

7. I cannot identify these figures without an explanation of the calculation.

H. W

(Financial, No. 143.)

COPY of DESPATCH from the Secretary of State for India to His Excellency the Most Honourable the Governor General of India in Council

My Lord Marquis,

India Office, London, 27 May 1884

Para 1 IN various communications which have been received from your Government, reference is made to the profit which it is supposed that the railways in India are now yielding to the revenue, not merely in the general improvement of the country and the stimulus given to trade, but in the direct financial result of the working of the lines

2 Thus, in your letter, dated the 23rd day of January 1883, No 29, after speaking of the proposals made in 1878, that a certain amount of net yearly charge should be accepted as the burden which might reasonably be imposed on the finances in connection with the construction and working of the railways, your Excellency observed, in the 39th paragraph, "Circumstances have entirely changed since this proposal was made, the railways were then being worked at a loss, they are now yielding a profit" And in the 52nd paragraph a statement was given of the loss and profit since 1872-73, with the remark, "In 1877-78 the railways, for the first time, yielded a net profit (132,000 l.). . . . During the year 1880-81 the railways yielded a net profit of 7,000 l., which in 1881-82 rose to 1,109,000 l."

Para. 53

3 The meaning of the figures on which these remarks were based was that the receipts from the railways, as shown in the accounts at the conventional rate of 10 rupees to the pound sterling, had increased so rapidly as greatly to exceed the charges calculated in the same manner, and undoubtedly they afford very striking evidence of the improvement in the financial condition of the country due to the progress of railway construction. No account was, however, taken in that calculation of the heavy charge, included in the heading of "Exchange," which arises from the circumstance that a large portion of the working-charges, namely, the guaranteed interest, East Indian Railway annuity, interest on debt, and purchase of stores, has to be defrayed in this country, and that each rupee remitted to England for that purpose realises, not two shillings, but less than one shilling and eightpence.

4. In the 10th paragraph of Mr. Hope's Minute, which accompanied the above-mentioned letter from your Excellency, I find the following passage — "It is acknowledged . . . that a larger sum than 2½ millions a year would ere long be available. The means for this extension are at last to hand, in the new item of railway profits. Let railways breed railways," a remark from which he appears to have considered that the time had already arrived when some direct profit was actually accruing to the finances, which might be legitimately applied as interest on capital to be raised for the prosecution of further undertakings

5. More recently, in the Financial Statement of your Government, published on the 15th of March last, I find the following words used by Sir Auckland Colvin —

Para 27

"Including the Estimates of the years 1883-84 and 1884-85, the net result to the State from its connection with railways, commencing from the year 1880-81, is as under —

	£
1880-81, loss - - - - -	50,612
1881-82, gain - - - - -	1,035,342
1882-83, gain - - - - -	419,343
1883-84, Revised Estimates, gain - - -	787,530
1884-85, Estimates, gain - - - - -	1,079,240
Net gain in Five-Years - - - £.	3,270,843"

And he proceeded to observe :—

Para 28

"The resources of the Government . . . are necessarily limited, and if, as is urged, as experience is daily showing, and as from the figures given in the last paragraph is proved to demonstration, the remunerative character of railway enterprise in India, when prudently carried out, is unquestionable, it may be fairly demanded that those whose interests in that enterprise are so considerable should not be backward in acting on the confidence of which they give to the Government reiterated assurances"

6. Although I cannot suppose that your Excellency's Government has overlooked the effect, which I have pointed out above, of the rate of exchange, such statements as these may, I fear, create a wrong impression as to the true financial results of the railways.

Compared with the table given in the Financial Statement, the "net result to the State from its connection with railways," during the five years from 1880-81 to 1884-85, is as follows, when corrected by adding the loss by exchange:—

	Result as shown in the Financial Statement.		Result as corrected by adding the Loss by Exchange.
	£		Rs
1880-81, loss	50,612	Charge	1,117,4320
1881-82, gain	1,035,342	Ditto	20,59,226
1882-83, gain	419,349	Ditto	53,57,912
Regular Estimate, 1883-84, gain	787,580	Ditto	66,08,714
Budget, 1884-85, gain	1,079,240	Ditto	61,10,659
Net Result of the Five Years, Gain	2 3,270,643	Charge	Rs 3,12,04,321

The difference between the two statements, amounting to 6,39,12,751 rupees, is mainly due to the omission, in the passage quoted in paragraph 5 of the charge under the head of exchange that has been incurred in connection with the railways classed as productive, but it also includes the charge arising from the transactions in connection with the Southern Mahratta and Subsidized Railways, as shown in the margin *

	Rs
* Loss by Exchange in respect of Rail-ways charged as Productive	5,92,84,028
Southern Mahratta Railway	21,20,268
Subsidized Railways	26,07,855
Rs	6,39,12,761

7. The great importance of this question of exchange is further illustrated by the fact that, while the sterling payments on railway revenue account have risen from 4,496,262 L. in 1871-72, to an estimate of 4,834,500 l. in 1884-85, showing an increase of only 7½ per cent, the number of rupees necessary to discharge them has increased from 4,61,64,730 rupees to 5,95,01,531 rupees, or by 29 per cent.

8. With the view of showing, subject to the explanation contained in the following paragraph, what has been the total charge borne by the revenues up to the present time on account of such works, a statement has been compiled, a copy of which is herewith forwarded for your Excellency's information, and of which the following is a summary.

	Rs.
(1) Railways constructed under Guarantee	
Total net charge on the Revenues, from 1848-49 to 1867-68 (the year in which State Railways were begun)	17,64,34,337
Ditto - from 1868-69 to 1878-79 (the year before the East Indian Railway was purchased)	15,35,27,793
Ditto - from 1879-80 to 1884-85	6,04,21,587
	39,93,83,767
Deduct Net gain to the Government from the East Indian Railway, from its purchase in 1879-80 to 1884-85	4,89,65,546
Balance Net charge on the Revenues arising from Railways constructed under the Guarantee system, from 1848-49 to 1884-85	35,04,18,221
(2) Total net charge for State Railways, from 1868-69 to 1884-85	5,55,95,985
(3) Ditto, for Southern Mahratta Railway, from 1882-83 to 1884-85	21,20,268
(4) Ditto, for Subsidized Railways, from 1881-82 to 1884-85	25,07,855
TOTAL Net Charge for all Railways, from 1848-49 to 1884-85	Rs 41,06,42,329

9 Your Excellency will observe, from the memorandum which accompanies the statement, that in its compilation "no attempt has been made to appraise the great military, political, and commercial advantages of the railways, to the Government and people of India. Credit has not been given for the advantage in the way of interest that the Government may have derived from the temporary possession of large balances of railway capital in England, nor, on the other hand, has any charge been made for interest on the very considerable advances of interest made to the Guaranteed Companies, or for the leave and pension allowances paid in England to persons employed on the State lines. The statement has been confined to the results deducible from the figures actually recorded in the accounts."

10. In drawing your attention to these figures, I wish it to be clearly understood that I am far from overlooking the great and most satisfactory progress which has been lately made, as proved by the following table:—

Average annual charge arising from Railways constructed under Guarantee.	Rs.
Five years, 1860-61 to 1864-65 - - - - -	1,93,07,908
Ditto - 1868-69 to 1872-73 - - - - -	1,84,14,005
Ditto - 1880-81 to 1884-85 - - - - -	26,10,085

while the average annual charge for railways of all kinds during the last group of five years, namely, 1880-81 to 1884-85, is 62,40,864 rupees

11 Nor are the prospects less hopeful if the attention be directed to the results of particular lines. Taking their net earnings, apart from the question of the division between the Government and the Companies under the various contracts, I find the following results (reckoning the capital and net earnings in every case in rupee currency):—

The East Indian Railway earned in 1882, on the capital outlay	8 56 per cent.
The Eastern Bengal Railway - - - - -	10 23 "
The Great Indian Peninsula Railway - - - - -	7 29 "
And the Bombay, Baroda, and Central Indian Railway - - - - -	5 69 "

while among the more recently-constructed State lines, the following results are highly encouraging:—

Net earnings in 1882 of the Rajputana-Malwa Railway - - - - -	5 57 per cent.
Patna-Gaya Railway - - - - -	5 43 "
Northern Bengal Railway - - - - -	5 23 "
Rangoon and Irawadi Valley Railway - - - - -	4 74 "

It must, however, be borne in mind that these rates of profit would be only receivable in India, and that, if the net earnings had to be remitted to England at the current rate of exchange as interest on capital subscribed in this country, when the exchange was at a higher rate as in former years, they would be subject to a material reduction, consequent on the present exchange value of the rupee.

12 A copy of this Despatch, with its enclosures, will be laid before the Select Committee which is now inquiring into the best means of providing for a more rapid extension of railway communication in India, in order that they may be made acquainted with the direct financial results to the Government of the railway policy up to the present date.

I have, &c
(signed) Kimberley

ENCLOSURES

MEMORANDUM

DIRECT FINANCIAL RESULTS OF THE GOVERNMENT TRANSACTIONS connected with INDIAN RAILWAYS

In the accompanying statement (No. 1) an endeavour has been made to show the direct financial result on the revenues of India, which has followed from the construction of the railways.

With regard to their revenue transactions, the earnings of the railways being realized in India in Indian currency, it has been requisite, in order to ascertain the direct effect of their working on the revenues of India, to convert into Indian currency all the payments made in England chargeable against their revenue, at the rate of exchange at which the money to make those payments was remitted from India, or, in other words, at the average rate obtained by Government each year for bills and telegraphic transfers on India.

In order to ascertain the gain or loss to the revenues of India involved in the capital transactions of the railways worked by Companies under contracts with prescribed rates of exchange, inasmuch as the results are affected by the operation of those rates, as well as by the rates of exchange obtained for remittances, it has been requisite to compare the effect of each of these two classes of exchanges with that of a uniform rate of exchange throughout the whole period of the comparison, and, therefore, the effects of these two classes of exchanges have in statement No. 2 been compared with those which would be derivable from the conventional rate of 2s the rupee adopted in the Accounts.

Thus,

Thus, the transactions of the Companies in India on capital account having been debited or credited to them at the prescribed rates of exchange, it has been shown in these statements what has been the difference between the sums in Indian currency thus debited or credited to the Companies, and those which would have been debited or credited to them in respect of the same transactions at the exchange of 2s the rupee.

Again, the transactions of the Companies with Government in England on capital account have been converted in this statement into Indian currency at the rates of exchange obtained by the Government each year for bills and transfers, and it has been shown what is the difference in Indian currency between these sums and those which would have been obtained by converting the same sums into Indian currency at the rate of 2s.

The difference between, or (as the case may be) the sum of, these respective differences, is the net loss or gain to Government in respect of the Companies' capital transactions which has been annually debited or credited to the revenues of India.

The sums paid in England for stores for the State Railways having been only charged to the railways at the exchange of 10 rupees to the pound, or 2s. the rupee, there is a further charge against these sums of the difference between the sterling payments in England for those stores converted into Indian currency at the average rate obtained each year for bills and transfers, and the equivalent of the same payments converted at 2s the rupee.

No attempt has been made to appraise the great military, political, and commercial advantages of the railways to the Government and people of India. Credit has not been given for the advantage in the way of interest that the Government may have derived from the temporary possession of large balances of railway capital in England, nor, on the other hand, has any charge been made for interest on the very considerable advances of interest made to the Guaranteed Companies, or for the leave and pension allowances paid in England to persons employed on the State lines. The statement has been confined to the results deducible from the figures actually recorded in the Accounts.

The following is a summary of the results.—

(1) Railways constructed under Guarantee	Rs.
Total net charge on the Revenues, from 1848-49 to 1867-68 (the year in which State Railways were begun) - -	17,64,34,387
Ditto - from 1868-69 to 1878-79 (the year before the East Indian Railway was purchased) - - - - -	15,35,27,793
Ditto - from 1879-80 to 1884-85 - - - - -	6,94,21,587
	39,93,83,767
Total net gain to the Government from the East Indian Railway, from its purchase in 1879-80 to 1884-85 - - -	4,89,65,546
Balance: Net charge on the Revenues arising from Railways constructed under the Guarantee system, from 1848-49 to 1884-85 - - - - -	35,04,18,221
(2) Total net charge for State Railways, from 1868-69 to 1884-85 -	5,55,95,985
(3) Ditto for Southern Mahratta Railway, from 1882-83 to 1884-85	21,20,268
(4) Ditto for Subsidized Railways, from 1881-82 to 1884-85 - -	25,07,855
TOTAL Net Charge for all Railways, from 1847-48 to 1884-85 - - - - -	Rs. 41,06,42,329

The great improvement which has taken place in recent years, notwithstanding the augmentation of the charge caused by the fall in the price of silver, will be seen from the following figures—

Railways constructed on the Guarantee system	Rs.
Average annual charge of five years, 1860-61 to 1864-65 - -	1,93,07,908
" " " " 1868-69 to 1872-73 - -	1,84,14,005
" " " " 1880-81 to 1884-85 - -	26,10,085
The average annual charge for all railways during the five years from 1880-81 to 1884-85 has been - - - - -	62,40,864

No. 1.

DIRECTORIAL RESULTS OF THE TRANSACTIONS CONNECTED WITH INDIA RAILWAYS IN INDIA AND BURMA.

Y E A R S.		GUARANTEED RAILWAYS									
		Net Traffic Receipts.	Interest, Surplus Profits, Supervision, and Cost of Land.				Exchange on Capital Transactions, as per annexed Statement.		Total Charges (Cols. 7 + 8, or 7 - 9.)	Net Charge (Cols. 10 - 3.)	
			In England.		Total. (Cols. 4 + 6.)	Loss.	Gain.				
			In India.	Sterling.				Equivalent of Col. 5 at Average Rate obtained for Bills, &c.			
1.	3.	4.	5.	6.	7.	8.	9.	10.	11.		
	Rs.	Rs.	£.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
1848-49	—	—	—	—	—	—	—	1,22,485	-1,22,485	-1,22,485	1
1849-50	—	—	5,666	13,457	93,437	—	—	1,09,122	-73,685	-73,685	2
1850-51	—	—	23,791	2,55,457	2,35,457	—	4,496	—	2,39,953	2,39,953	3
1851-52	—	—	47,794	4,74,867	5,37,725	—	—	—	6,71,930	6,71,930	4
1852-53	—	—	69,775	6,24,887	6,28,152	—	—	—	8,89,058	8,89,058	5
1853-54	77,095	74,640	79,936	7,95,218	8,69,868	—	—	—	12,48,048	11,70,948	6
1854-55	1,54,342	2,27,770	129,197	13,40,855	15,68,622	—	—	3,34,722	12,34,906	10,79,561	7
1855-56	6,52,658	7,07,435	297,042	29,55,029	36,62,461	—	—	—	10,10,232	42,57,574	8
1856-57	12,68,520	11,08,872	496,039	49,34,688	60,43,566	—	—	—	79,68,700	64,00,180	9
1857-58	16,39,358	8,51,690	655,854	63,92,080	72,43,779	—	—	—	95,33,718	78,94,000	10
1858-59	21,31,200	10,82,256	819,019	81,90,190	92,72,446	—	—	—	1,21,67,789	1,09,36,589	11
1859-60	43,96,985	37,77,176	1,151,624	1,15,46,240	1,57,23,376	—	—	—	1,95,45,021	1,51,48,036	12
1860-61	42,48,142	13,43,228	1,454,518	1,45,45,180	1,58,94,408	—	—	—	2,00,81,232	1,63,33,140	13
1861-62	42,67,222	14,83,539	1,737,574	1,76,67,760	1,91,51,299	—	—	—	2,36,38,533	1,96,51,351	14
1862-63	68,24,299	16,13,980	2,135,136	2,14,63,147	2,30,77,127	—	—	—	2,65,57,191	1,97,12,301	15
1863-64	89,62,349	21,91,716	2,422,426	2,43,51,089	2,68,55,799	—	—	—	2,99,36,078	2,06,67,738	16
1864-65	1,23,25,659	41,96,850	2,649,068	2,66,28,772	3,07,55,622	—	—	—	3,51,69,663	2,07,75,013	17
1865-66	3,12,65,630	26,05,670	2,854,246	2,88,42,937	3,14,48,577	—	—	—	3,49,27,251	31,61,624	18
1866-67	2,46,92,340	37,66,049	2,995,840	3,12,60,939	3,50,26,979	—	—	—	3,84,41,574	1,21,49,234	19
1867-68	2,25,04,540	24,81,610	3,444,470	3,57,48,913	3,82,29,623	—	—	—	3,91,47,797	1,66,93,167	20
1868-69	2,44,00,600	29,81,370	3,844,399	3,98,98,627	4,28,79,997	—	—	—	4,34,55,787	1,90,55,187	21
1869-70	2,93,70,400	20,37,780	4,988,167	4,22,99,434	4,42,36,211	—	—	—	4,55,56,237	1,61,85,827	22
1870-71	2,86,28,629	19,68,790	4,302,739	4,58,95,787	4,77,64,577	—	—	6,94,674	4,77,22,998	1,85,01,283	23
1871-72	3,18,80,899	16,67,210	4,193,252	4,61,64,720	4,73,31,940	—	1,85,181	—	4,80,17,121	1,61,36,239	24
1872-73	2,86,03,770	27,84,870	4,569,266	4,82,03,250	5,09,88,129	—	—	1,92,850	5,07,95,279	2,27,91,566	25
1873-74	3,61,31,110	27,26,890	4,581,547	4,91,42,850	5,18,69,790	—	—	3,91,951	5,14,77,786	1,53,46,616	26
1874-75	4,13,15,640	49,11,540	4,699,772	5,00,04,310	5,45,16,859	—	—	1,26,996	5,46,43,855	1,33,77,114	27
1875-76	4,25,93,299	32,23,719	4,802,902	5,11,28,629	5,43,54,799	—	—	—	5,44,17,994	1,27,94,784	28
1876-77	5,08,76,416	51,49,919	4,636,768	5,42,84,114	5,77,33,169	—	—	—	5,76,76,579	88,02,110	29
1877-78	6,59,34,599	81,91,899	4,635,191	5,36,15,320	6,18,07,210	—	—	23,118	6,17,84,092	-47,50,495	30
1878-79	5,20,13,990	91,13,289	4,689,376	5,69,83,610	6,56,96,590	—	—	—	6,29,99,729	1,53,47,669	31
1879-80	4,62,25,840	72,59,349	4,792,479	5,69,18,960	6,37,68,590	—	—	11,14,474	6,26,54,116	1,64,28,586	32
1880-81	2,91,33,133	42,33,659	3,251,574	3,51,75,169	4,33,48,219	—	—	1,23,409	4,32,19,711	1,40,86,611	33
1881-82	3,61,56,290	41,59,340	3,264,813	3,93,62,270	4,35,12,610	—	—	—	4,34,95,630	82,09,780	34
1882-83	3,58,29,469	56,68,199	3,399,834	4,06,71,240	4,63,39,340	—	—	7,73,956	4,55,62,984	97,12,524	35
1883-84 (Revised Estimate)	3,36,50,000	64,72,000	3,284,200	4,03,56,259	4,68,28,259	—	—	12,74,005	4,55,54,245	1,19,04,245	36
1884-85 (Budget Estimate)	3,61,30,000	53,53,000	3,235,000	3,95,15,380	4,51,68,380	—	—	—	4,51,79,841	90,49,841	37
	77,42,75,812	10,38,54,199	93,399,908	1,03,14,53,028	1,13,53,97,227	—	—	4,36,37,677	52,85,325	1,17,36,59,579	38
									77,42,75,812		
		SUBSIDIZED RAILWAYS. (See Col. 25.)									
1881-82	—	1,32,266	2,011	24,246	1,56,506	—	—	—	1,56,506	1,56,506	39
1882-83	—	2,59,920	9,991	1,22,769	3,82,689	—	—	—	3,82,689	3,82,689	40
1883-84 (Revised Estimate)	—	7,25,000	25,100	3,08,429	10,33,429	—	—	—	10,33,429	10,33,429	41
1884-85 Budget Estimate	—	6,62,000	22,260	2,73,231	9,35,231	—	—	—	9,35,231	9,35,231	42
	—	7,79,186	59,392	7,28,675	25,07,855	—	—	—	25,07,855	25,07,855	43

No. 1.

DIRECT FINANCIAL RESULTS of the TRANSACTIONS connected with INDIAN RAILWAYS in India and England.

STATE RAILWAYS.					EAST INDIAN RAILWAY (subsequent to its purchase by the Government)							SUBSIDIZED RAILWAYS.	SOUTHERN MAHARATTA RAILWAY	GRAND TOTAL NET CHARGE. (Cols. 13 + 16 + 25 + 26 + 24.)	
Gross Earnings.	Working Expenses and Interest on Debt in India.	Loss by Exchange on Capital Expenditure in England.	Total. (Cols. 13 + 14.)	Net Charge. (Cols. 15 — 12.)	Gross Earnings.	Working Expenses, Interest, Annuity, and Surplus Profits.				Net Charge. (Cols. 17 — 23.)	Net Charge (from Foot of Col. 11).	Net Charge (from Foot of Col. 16).	Net Charge (from Foot of Col. 16).	Net Charge (from Foot of Col. 16).	
						In India.	In England.		Total. (Cols. 18 + 20.)						Net Charge (from Foot of Col. 11).
12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	£.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
21	—	4,10,290	1,28,139	5,38,429	5,38,429	—	—	—	—	—	—	—	—	—	—
22	80,800	3,87,900	25,552	4,13,452	3,32,652	—	—	—	—	—	—	—	—	—	—
23	75,700	5,32,070	39,641	5,55,711	4,79,951	—	—	—	—	—	—	—	—	—	—
24	37,600	6,84,500	39,205	7,23,765	6,86,105	—	—	—	—	—	—	—	—	—	—
25	1,65,330	11,20,580	1,61,509	12,94,089	11,28,759	—	—	—	—	—	—	—	—	—	—
26	3,99,140	22,35,400	6,93,154	29,28,554	25,29,414	—	—	—	—	—	—	—	—	—	—
27	13,09,860	37,95,310	9,44,428	46,49,738	33,39,878	—	—	—	—	—	—	—	—	—	—
28	20,28,350	60,35,300	8,16,713	68,52,013	39,23,663	—	—	—	—	—	—	—	—	—	—
29	38,06,680	81,67,260	10,51,908	92,19,168	54,12,488	—	—	—	—	—	—	—	—	—	—
30	58,20,770	1,09,17,590	21,23,238	1,30,40,828	72,20,058	—	—	—	—	—	—	—	—	—	—
31	97,68,280	1,65,38,850	14,70,620	1,80,09,470	82,41,190	—	—	—	—	—	—	—	—	—	—
32	1,54,87,280	2,26,39,310	10,85,596	2,37,24,906	82,37,626	1,17,76,920	22,85,380	34,397	4,13,410	26,98,710	37,53,949	-90,22,971	—	—	—
33	2,26,80,050	2,81,21,880	11,52,073	2,92,73,953	65,84,903	4,25,31,170	1,65,87,370	1,337,167	1,60,71,120	3,26,54,490	3,20,33,976	-94,97,194	—	—	—
34	2,55,65,420	2,84,68,370	9,09,478	2,93,71,848	38,06,428	4,71,05,530	1,72,83,490	1,592,298	1,91,97,570	3,64,81,390	3,90,92,052	-1,01,13,478	1,56,506	—	—
35	2,64,63,270	2,76,08,780	8,46,821	2,84,55,601	19,92,331	4,90,13,410	2,20,79,630	1,564,827	1,92,28,500	4,13,08,380	4,11,24,226	-5,89,184	3,82,689	-21,77,148	—
36	3,08,73,000	3,01,20,000	17,38,880	3,18,58,880	9,85,880	5,03,02,460	2,23,69,000	1,514,700	1,86,12,630	4,09,34,190	4,10,35,281	-92,67,179	10,33,429	18,42,359	—
37	3,71,69,000	3,49,30,846	23,35,384	3,73,25,230	1,56,230	4,85,02,460	2,26,14,000	1,577,300	1,94,12,920	4,20,27,920	4,21,26,920	-64,75,540	9,35,231	24,45,077	—
38	18,26,39,650	22,26,82,230	1,55,53,396	23,82,35,635	5,55,95,985	24,62,31,950	10,32,18,930	7,620,680	9,29,36,240	19,61,54,170	17,06,404	-4,89,65,546	25,07,855	21,20,268	—
* Including Rs. 3,77,846, the equivalent of 30,700 L., to be disbursed in England.					SOUTHERN MAHARATTA RAILWAY (See Col. 26.)										
39	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
40	—	—	—	—	—	—	3,29,500	—	—	—	—	—	—	—	—
41	—	—	—	—	—	—	8,60,000	—	—	—	—	—	—	—	—
42	—	—	—	—	—	—	8,95,000	—	—	—	—	—	—	—	—
43	—	—	—	—	—	—	20,84,500	—	—	—	—	—	—	—	—

No. 2

embodied in the Statement of Direct Financial Results (No 1)

GUARANTEED RAILWAYS

IN ENGLAND											Net Result.	
Amount of Capital						Difference between Rupees at Average Rate of Remittance and 2s Rate.		Portion of Loss Repaid in respect of Revenue Stores	(Combination of Cols. 7, 8, 15, 16, and 17)			
Disbursed	Received.	Net Amount Disbursed.		Net Amount Received		Loss	Gain.		Loss.	Gain		
		Sterling (Cols 9-10)	Equivalent of Col 11 at Average Rate obtained for Bills, &c.	Sterling (Cols 10-9)	Equivalent of Col 13 at Average Rate obtained for Bills, &c.							
0	10	11	12.	13	14	15.	16	17.	18	19		
£	£	£.	Rs	£.	Rs	Rs.	Rs	Rs	Rs	Rs		
1	—	50,000	—	90,000	10,32,485	—	1,22,485	—	—	1,22,485		
2	69,211	506,702	—	287,401	25,39,237	—	1,68,227	—	—	1,68,122		
3	61,164	456,179	—	89,016	39,09,427	40,723	—	—	4,406	—		
4	154,212	291,324	—	137,112	13,04,016	7,104	—	—	1,58,305	—		
5	174,020	382,049	—	208,029	20,91,181	—	10,691	—	2,00,131	—		
6	252,484	681,250	—	378,775	37,68,124	19,623	—	—	3,78,785	—		
7	600,878	3,418,718	—	2,457,840	2,55,08,303	—	9,29,908	—	—	2,34,722		
8	1,935,073	3,937,203	—	2,002,130	1,09,17,563	1,03,737	—	—	12,47,708	—		
9	1,722,813	3,342,658	—	1,589,845	1,56,10,674	63,376	—	—	16,25,140	—		
10	1,314,727	2,972,869	—	1,635,239	1,59,66,593	4,15,797	—	—	22,89,948	—		
11	1,940,040	6,567,082	—	4,617,033	4,61,70,330	—	—	—	31,95,343	—		
12	2,745,068	5,774,190	—	3,048,428	3,04,82,230	—	—	—	42,21,645	—		
13	2,389,990	5,780,382	—	3,399,032	3,30,09,920	—	—	—	46,86,874	—		
14	1,885,016	8,562,848	—	6,974,212	7,01,07,292	—	3,65,182	—	41,67,274	—		
15	1,870,182	5,244,149	—	3,373,957	3,39,16,217	—	1,76,847	—	34,00,004	—		
16	1,368,901	6,104,020	—	4,635,688	4,65,99,385	—	2,42,705	—	27,74,279	—		
17	2,011,065	3,831,100	—	1,790,035	1,79,94,069	—	93,710	—	23,65,941	—		
18	9,070,052	4,102,721	—	1,082,969	1,00,40,655	—	1,18,975	—	29,78,677	—		
19	4,013,983	6,784,999	—	2,770,958	2,89,14,323	—	12,04,337	—	18,14,595	—		
20	4,480,735	9,471,340	—	4,990,605	5,17,94,387	—	18,88,337	—	5,68,084	—		
21	2,221,91	6,502,506	—	4,250,915	4,41,17,604	—	16,08,454	—	5,76,790	—		
22	2,902,300	5,098,225	—	2,096,325	2,16,41,548	—	6,76,298	—	13,18,019	—		
23	5,276,417	7,030,077	—	2,853,680	2,51,05,707	—	15,69,107	—	—	6,34,674		
24	2,249,118	3,785,723	—	1,207,065	1,23,08,939	—	3,32,889	—	1,85,181	—		
25	1,494,931	856,702	658,632	69,48,100	—	3,61,880	—	—	—	1,92,850		
26	1,270,283	1,280,835	40,448	4,33,856	—	29,237	—	—	—	3,91,954		
27	1,171,318	789,760	781,648	84,78,894	—	6,52,414	—	—	—	1,25,096		
28	2,897,077	1,660,902	1,210,175	1,34,30,844	—	13,99,091	—	—	9,73,164	—		
29	2,442,938	889,094	1,538,238	1,81,84,250	—	26,51,870	—	—	10,45,390	—		
30	2,500,192	2,277,235	312,656	36,19,782	—	4,90,172	—	—	—	23,118		
31	1,790,144	874,739	923,545	1,12,47,120	—	19,91,679	—	—	12,63,839	—		
32	1,270,033	805,764	471,179	56,02,906	—	9,51,200	—	12,30,200	—	11,14,474		
33	678,104	239,589	738,521	88,76,121	—	14,00,911	—	10,31,210	—	1,28,400		
34	1,270,445	340,916	932,529	1,12,43,050	—	19,17,760	—	6,77,290	8,53,420	—		
35	1,218,913	813,428	404,783	40,73,974	—	9,26,144	—	10,20,060	—	7,76,356		
36	1,878,409	1,468,000	410,400	50,42,095	—	9,38,995	—	15,00,000	—	12,74,095		
37	2,708,700	1,855,000	851,700	1,04,82,461	—	10,65,461	—	15,00,000	11,461	—		
38	10,865,888	116,130,480	9,391,744	10,86,24,402	55,728,596	59,60,79,729	1,63,76,325	94,83,732	69,58,700	4,36,37,677	52,85,325	

SOUTHERN MAHRATTA RAILWAY

39	190,073	1,724,926	—	—	1,693,653	1,95,82,808	—	36,46,278	—	—	25,06,648
40	224,400	100,000	123,400	15,16,339	—	—	2,82,399	—	—	9,23,339	—
41	268,700	—	208,700	33,07,077	—	—	6,20,077	—	—	15,50,077	—
42	133,073	1,824,626	302,100	48,25,416	1,593,653	1,96,82,808	9,02,416	36,46,278	—	25,42,416	25,06,648

EAST INDIAN RAILWAY

43	50,180	8,803	27,323	2,98,380	—	—	55,150	—	—	55,150	—
44	574,483	692	529,893	62,84,536	—	—	10,65,608	—	6,80,120	3,74,486	—
45	4,022,544	610	475,063	57,34,962	—	—	9,74,313	—	4,87,280	5,10,902	—
46	453,031	1,774	458,901	55,77,538	—	—	10,38,926	—	9,22,580	1,15,846	—
47	393,000	1,800	394,800	48,43,030	—	—	9,01,930	—	8,48,279	53,551	—
48	700,000	500	699,500	80,09,231	—	—	16,14,831	—	16,14,231	—	—
49	2,587,000	14,148	2,573,428	3,13,78,464	—	—	50,43,664	—	45,32,430	11,11,234	—

Appendix, No 18

PAPER handed in by Mr. R W. Crawford.

EAST INDIAN RAILWAY COMPANY .

APPENDIX, showing the Working of the Undertaking for the Four Years 1880—1883.

	1880.	1881.	1882	1883.
MILEAGE				
MAIN LINE - - - - No	1,504½	1,506½	1,508½	1,509½
Single - - - - "	1,098½	1,096	1,087½	1,040
Double - - - - "	410½	410½	421	469½
STATE LINES (single) worked by Company - - - - "	-	-	-	143½
FINANCIAL *				
Gross receipts - - - £	3,986,686	4,162,718	4,319,118	4,534,463
Working expenses - - - "	1,800,814	1,825,769	1,595,466	1,875,437
Net receipts - - - - "	2,685,822	2,836,929	2,723,647	2,959,046
Net receipts, at exchange agreed with Secretary of State - - - - "†	2,456,104	2,579,026	2,476,042	2,566,643
Charges for annuities A & B., guaranteed interest, &c. - - - - "†	1,689,168	1,841,420	1,644,521	1,649,164
Expenditure on capital account - - - - "	27,047	80,980	111,094	320,080
Interest on capital account - - - - "†	578	1,579	4,372	16,501
Interest on capital advance ac- count - - - - - "†	941	6,251	18,725	19,253
Interest on value of stores in hand - - - - - "†	33,770	44,041	38,684	33,253
Contribution to provident insti- tution - - - - - "†	24,561	25,790	24,760	25,666
Total charges - - - - - "†	1,699,018	1,719,081	1,731,012	1,743,837
Net balance of profit - - - - - "†	757,086	859,945	745,080	822,306
Government share, ½th - - - - - "†	605,669	687,956	596,024	658,244
Company's share, ½th - - - - - "†	151,417	171,989	149,056	164,561
STATE LINES				
Gross receipts - - - - £	-	-	-	79,330
Working expenses - - - - "	-	-	-	29,834
Net receipts - - - - - "	-	-	-	49,496
Government share, ½th - - - - - "	-	-	-	39,597
Company's share, ½th - - - - - "	-	-	-	9,899
GUARANTEED INTEREST - per cent. "	4 - -	4 - -	4 - -	4 - -
DIVIDEND OF SURPLUS } PROFITS - - - - - }	2 4 6	2 12 4	2 4 6	2 12 6
INTEREST AND DIVIDEND } together - - - - - }	6 4 6	6 12 4	6 4 6	6 12 6

* Exchange, 1 = 10 of the rupee throughout, except those items marked thus †

APPENDIX, showing the Working of the Undertaking for the Four Years 1880—1883—*continued*.

	1880	1881.	1882	1883
TRAFFIC DEPARTMENT				
Train mileage - - - <i>No</i>	7,044,620½	6,320,535½	9,051,362½	10,376,436½
Passengers carried one mile - - "	687,892,444	706,672,860	882,445,855	884,866,091
Goods carried one mile - - <i>Tons</i>	802,424,409	965,322,555	1,004,617,714	1,148,610,488
Gross receipts, per train mile - <i>£</i>	9 10½	10 -	9 6½	8 9
Working expenses " - "	3 2½	3 2½	3 6½	3 2½
Net receipts " - "	6 7½	6 9½	6 - ½	5 6½
PASSENGERS.				
<i>Numbers</i>				
First class - - - <i>No</i>	43,668	42,248	45,619	46,799
Second class - - - "	145,782	151,838	155,644	150,294
Intermediate class - - - "	592,119	603,963	601,089	429,149
Third class - - - "	7,800,364	7,577,683	9,052,587	10,101,475
	8,081,828	8,375,642	9,854,929	10,727,717
<i>Fares</i>				
First class - - - per mile <i>d.</i>	2 06	2 06	2 06	2 06
Second class - - - " - "	1 03	1 03	1 03	1 03
Intermediate class - - - "	52	52	52	52
Third class - - - " - "	34	34	29	29
<i>Receipts.</i>				
First class - - - <i>£.</i>	47,449	44,171	46,928	47,456
Second class - - - "	66,002	60,342	60,688	59,463
Intermediate class - - - "	42,723	43,779	44,929	39,589
Third class - - - "	787,616	819,265	910,993	874,276
	943,790	967,557	1,063,529	1,020,774
MERCHANDISE				
<i>Tonnage</i>				
Goods - - - <i>Tons</i>	2,561,049	2,879,134	3,307,128	5,760,142
Minerals - - - "	910,060	947,820	1,076,530	1,177,877
	3,471,109	3,826,964	4,383,658	4,938,019
<i>Rates</i>				
Coal - - - per ton permile <i>d</i>	52	52	52	52
Cotton - - - " - "	93	93	89	89
Grain, rice, and seeds " - "	60	60	46	37
Piece goods - - - " - "	1 58	1 56	1 56	1 56
Sugar - - - " - "	78	78	78	78
<i>Receipts</i>				
Goods - - - <i>£</i>	2,279,677	2,463,742	2,486,480	2,768,014
Minerals - - - "	452,343	487,209	513,418	531,651
	2,732,020	2,950,951	2,999,898	3,299,665
ENGINEERING DEPARTMENT				
Maintenance and renewals of permanent way - - - <i>£</i>	404,070	399,096	602,788	677,785
Cost per mile of line per month " - "	22 7 7½	22 1 5	33 6 9	37 8 4½
Cost per train mile - - - <i>d.</i>	12 21	11 5	15 98	15 67
LOCOMOTIVE DEPARTMENT				
Cost of locomotive power - - <i>£</i>	319,390	364,817	405,772	368,437
Cost per train mile - - - <i>£</i>	9 64	10 22	10 76	8 52
Out-turn of steam coal from company's collieries - - <i>Tons</i>	177,585	205,837	191,184	205,644
Quantity consumed - - - "	167,844	180,193	195,693	222,660
Average cost per ton (including carriage) - - - <i>£</i>	9 10	8 5	8 4½	8 8½
LOCOMOTIVE STOCK - - - <i>No</i>	538	539	563	650
CARRIAGE STOCK - - - "	982	1,055	1,209	1,223
WAGON STOCK - - - "	7,730	8,122	8,729	8,769

S U M M A R Y

	TOTAL for Four Years	Average of Four Years
Gross receipts - - - - - £	16,952,949	4,238,237
Working expenses - - - - - "	5,897,505	1,474,370
Net receipts - - - - - "	11,055,444	2,763,861
Charges for annuities, guaranteed interest, &c. " †	6,574,273	1,643,568
Interest on Capital account - - - - - " †	28,020	5,757
Interest on Capital advance account - - - - - " †	45,170	11,293
Interest on value of stores in hand - - - - - " †	149,698	37,424
Contribution to provident institution - - - - - " †	100,777	25,194
Net balance of profit - - - - - " †	3,184,866	796,216
Government share, $\frac{4}{5}$ ths - - - - - " †	2,547,393	636,073
Company's share, $\frac{1}{5}$ th - - - - - " †	636,978	159,243
Interest and dividend per cent - - - - - £	25 13 10	6 8 5 $\frac{1}{2}$
Passengers - - - - - No	37,040,116	9,260,029
Passengers' receipts - - - - - £	3,995,647	993,912
Passengers carried one mile - - - - - No	3,161,867,230	790,460,607
Goods and minerals - - - - - Tons	16,819,745	4,154,936
Goods and minerals receipts - - - - - £.	11,972,414	2,993,108
Goods carried one mile - - - - - Tons	3,920,984,161	980,240,020
Maintenance and renewal of permanent way - £	2,083,739	520,935
Out-turn of steam coal from collieries - - - Tons	780,335	195,084

Appendix, No 19

PAPERS handed in by Major *L. Conroy-Gordon*, R 1 , and referred to in his Evidence,
6th May 1884, Question 3507

[Issue V.—No. 1A.]

Appendix, No. 19.

PAPERS handed in by Major L. Conway-Gordon, R.E., and referred to in his Evidence, 6th May 1884, Question 3507.

ABSTRACT STATEMENT of PUBLIC WORKS EXPENDITURE, from Year 1867-68 to Date.

India Currency converted at Rs. 10 = £. 1. English Currency in £. Sterling.

	Reference to Detail Statement.	1867-68.	1868-69.	1869-70.	1870-71.	1871-72.	1872-73.	1873-74.	1874-75.
C.—POST OFFICE, TELEGRAPH, AND MINT:									
16. Telegraphs	£.	514,801	685,095	553,401	501,033	450,602	483,549	411,837	432,109
F.—FAMINE RELIEF AND INSURANCE:									
33. Protective Works, Railways	£.	-	-	-	-	-	-	-	-
34. Protective Works, Irrigation	£.	-	-	-	-	-	-	-	-
33 & 34.—Protective Works, Railways and Irrigation.	£.	-	-	-	-	-	-	-	-
G.—EXPENDITURE ON PRODUCTIVE PUBLIC WORKS, REVENUE ACCOUNT:									
36. State Railways (Working Expenses)	F.	-	29,957	8,860	7,500	7,820	11,171	46,388	86,001
East Indian Railway (Working Expenses)	-	-	-	-	-	-	-	-	-
37. Guaranteed Railways (Interest and Excess Profits).	G.	3,692,631	4,556,350	4,291,945	4,489,609	3,198,303	3,269,467	3,463,275	3,214,202
East Indian Railway (Interest and Excess Profits).	-	-	-	-	-	1,724,580	1,578,386	1,684,661	1,877,921
38. Irrigation and Navigation (Working Expenses)	-	185,039	167,060	190,170	212,511	234,900	255,124	265,938	280,879
Madras Irrigation and Canal Company	-	52,977	54,150	53,980	53,232	51,202	50,547	50,609	50,512
39. Interest on debt incurred for Productive Public Works.	H.	4,307	29,218	93,668	169,929	216,854	233,116	407,873	533,930
Annuaire in purchase of Guaranteed Railways, &c.	-	-	-	-	-	-	-	-	-
	£.	3,935,044	4,436,735	4,647,581	4,923,790	5,173,848	5,458,111	5,625,134	6,081,551
H.—EXPENDITURE ON PUBLIC WORKS NOT CLASSED AS PRODUCTIVE:									
40. State Railways, Capital	I.	-	-	5,743	7,926	2,816	10,833	52,756	105,193
41. State Railways, Revenue	K.	-	-	-	-	-	-	-	-
42. Subsidized Railways	L.	-	-	-	-	-	-	-	-
Southern Mahratta	-	-	-	-	-	-	-	-	-
43. Frontier Railways	M.	-	-	-	-	-	-	-	-
44. Irrigation and Navigation	-	536,067	563,583	528,917	514,679	448,415	651,749	555,296	663,034
45. Military Works	-	-	-	-	-	-	-	-	-
46. Civil Buildings	-	6,099,546	6,744,036	5,573,886	4,502,336	3,402,719	3,346,875	3,870,319	3,497,766
	£.	6,635,613	7,342,069	6,088,546	5,024,941	4,832,371	5,176,015	5,621,332	5,451,919
N.—EXPENDITURE ON PRODUCTIVE PUBLIC WORKS, CAPITAL ACCOUNT:									
50. State Railways	N.	594	552,398	190,870	440,372	644,620	1,413,649	2,354,625	3,014,130
East Indian Railway									
51. Irrigation and Navigation	O.	219,255	468,849	2,007,361	718,435	933,854	770,920	1,198,682	1,235,391
Miscellaneous Public Improvements (Madras Harbour).									
	£.	219,849	1,021,247	2,198,231	1,167,810	1,628,474	2,184,569	3,553,307	4,249,521
		11,895,367	13,485,146	13,487,759	11,617,664	12,085,295	13,302,244	15,211,610	16,215,159
Less,—Receipts as per Abstract Statement		3,669,461	3,960,018	4,494,361	4,412,326	4,427,697	4,144,142	5,019,865	5,695,609
Net charge to the State		7,625,846	9,525,128	8,993,398	7,205,278	7,657,598	9,158,102	10,191,745	10,609,541
Deduct,—Debt created or incurred on the purchase of the East Indian and Eastern Bengal Railways and Madras Irrigation Canal.		-	-	-	-	-	-	-	-
ACTUAL NORMAL OUTLAY	£.	7,625,846	9,525,128	8,993,398	7,205,278	7,657,598	9,158,102	(a) 10,191,745	(a) 10,609,541

(a) Famine in Bengal and Orissa.

Appendix, No. 19.

PAPERS handed in by Major L. Conway-Gordon, R.E., and referred to in his Evidence, 6th May 1884, Question 3507.

ABSTRACT STATEMENT of PUBLIC WORKS EXPENDITURE, from Year 1867-68 to Date.

Indian Currency converted at Rs. 10 = £. 1. English Currency in £. Sterling.

1875-76.	1876-77.	1877-78.	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.	TOTAL.	REVISED ESTIMATE, 1883-84.	BUDGET ESTIMATE, 1884-85.
£.	£.	£.	£.	£.	£.	£.	£.	£.	£.	£.
493,160	473,127	480,895	525,921	451,143	407,884	536,201	625,279	8,116,017	711,800	822,200
-	-	-	-	-	-	314,551	-129,101	485,450	625,900	1,138,900
-	-	-	-	-	-	155,149	263,443	358,892	291,000	316,100
-	-	-	-	-	-	756,000	134,342	884,342	916,900	1,145,700
195,414	287,089	426,005	740,373	1,215,231	1,607,528	1,686,392	1,534,176	7,890,835	1,691,000	2,032,700
-	-	-	-	228,538	1,605,362	1,646,959	2,069,398	5,550,227	2,045,500	2,052,500
3,325,542	3,295,362	3,441,495	3,525,965	3,393,691	3,411,733	3,678,734	3,873,644	73,715,039	3,951,370	3,770,200
1,603,974	1,096,311	2,013,252	2,074,639	2,933,872	266,659	1,023	-	-	-	-
350,758	361,356	370,847	381,550	474,001	475,473	355,655	501,936	5,073,867	519,000	562,100
59,504	59,483	59,335	59,568	59,455	59,538	59,196	24,978	706,066	-	-
734,334	835,133	1,037,910	1,407,824	1,616,511	2,381,745	2,339,025	2,517,880	14,731,117	2,594,700	2,870,100
-	-	-	-	-	603,298	1,239,446	1,216,735	3,449,479	1,263,300	1,255,100
6,260,526	6,570,434	7,369,807	8,180,919	8,352,890	10,741,753	11,097,800	11,741,747	111,206,619	11,984,870	12,542,760
66,279	95,287	71,204	220,850	471,410	77,003	247,673	467,776	1,814,919	-374,000	166,700
-	-	-	-	-	-	-	150,122	150,122	170,900	176,700
-	-	-	-	-	-	17,727	39,663	57,130	100,300	88,400
-	-	-	-	-	-	-	32,950	32,950	86,000	89,500
-	-	-	-	1,334,350	2,233,615	224,682	259,500	4,112,147	-22,500	-73,000
775,795	675,711	737,759	636,919	668,907	769,103	789,933	901,115	10,384,873	797,000	752,400
1,337,728	1,292,423	1,153,929	1,190,528	966,237	669,168	1,070,543	964,307	77,904,786	1,036,500	923,600
3,845,757	4,017,228	3,983,863	3,129,204	2,936,202	3,248,554	4,043,170	4,350,314	5,047,809	5,047,809	3,965,300
5,525,590	5,192,232	5,066,965	5,171,501	6,971,166	7,397,443	6,353,531	7,165,747	94,457,617	6,841,400	6,089,000
3,165,184	2,801,861	3,644,968	3,327,888	2,080,493	2,553,629	1,635,151	1,647,252	30,480,725	3,069,800	3,275,600
-	-	-	-	-	843,711	21,524	15,214	885,449	-	-
-	-	-	-	9,730,862	418,436	1,041,562	628,536	11,319,389	742,000	540,000
1,105,447	917,223	806,084	794,654	593,837	614,450	565,804	3,324,308	15,355,735	753,100	948,800
-	-	-	250,356	85,000	4,792,017	619,084	-	5,411,701	-	-
-	-	-	-	-	79,000	68,306	49,808	533,070	-533,100	-
4,270,623	3,719,084	4,791,052	4,361,298	13,695,192	9,297,233	3,962,931	4,965,112	64,485,389	4,931,800	4,744,400
16,549,884	13,911,334	17,708,719	18,260,233	28,870,400	27,934,263	22,735,563	24,332,227	279,149,544	24,486,770	25,667,069
5,959,000	5,999,754	9,104,637	8,095,613	9,876,927	17,789,138	14,638,473	13,615,212	121,201,373	14,321,100	15,122,300
10,599,884	9,093,460	8,604,022	10,166,620	13,993,473	10,145,125	8,667,090	10,717,015	157,948,271	10,165,670	10,544,760
-	-	-	-	9,576,614	-	586,300	2,242,915	12,405,329	504,000	1,023,700
(a) 10,599,884	(b) 9,093,460	(b) 8,604,022	16,154,626	(c) 9,416,859	(d) 10,145,125	8,074,790	8,474,100	145,542,442	9,661,670	9,521,060

(b) Famine in Madras and Bombay. During 1877-78, Public Works outlay to the extent of 1,093,491 £, was transferred to Famine.

(c) Afghan War. See outlay on Frontier Railways.

[Issue V.—No. 1 A, Schedule E]

F—FAMINE RELIEF AND INSURANCE

33.—PROTECTIVE WORKS, RAILWAYS.

RAILWAYS		1881-82	
		£	
Rewari-Ferozapore	- - - - -	162,173	1
Southern Mahratta	- - - - -	200,000	2
Bilaspur-Bitwah	- - - - -	-	3
Jhansi-Manickpur	- - - - -	-	4
Vizagapatam-Rajapur	- - - - -	-	5
Cuddapah-Nellore	- - - - -	-	6
Bellary Kistna	- - - - -	-	7
Western Deccan	- - - - -	102,288	8
Stores	- - - - -	-	9
		£ 614,551	0

Calcutta,
22 March 1884 }

[Issue V.—No. 1 A.; Schedule F]

G.—EXPENDITURE ON PRODUCTIVE PUBLIC WORKS (REVENUE ACCOUNT)

36.—STATE RAILWAYS (WORKING EXPENSES)

Indian Currency converted at Rs 10 = £ 1 English Currency in £ Sterling

RAILWAYS.	1867-68	1868-69	1869-70	1870-71	1871-72	1872-73	1873-74	1874-75	
	£	£	£	£	£	£	£	£	
BEYCAL									
Eastern Bengal	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	1
Calcutta and South-Eastern	- - - - -	20,957	8,869	7,500	7,820	7,303	20,030	7,120	2
Nalhati	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	3,000	5,073	7,407	3
Northern Bengal	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	4
Tirhoot	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	5
Patna and Gya	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	6
BRITISH BURMAH									
Rangoon and Irrawaddy	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	7
Rangoon and Sittang	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	8
CENTRAL PROVINCES									
Nagpore and Chhutteogurh	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	9
Wardha Coal	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	2,403	10
NORTH-WESTERN PROVINCES AND OUDH.									
Ghazipore and Dildarnagar	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	11
Cawnpore and Farrukabad	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	12
Muttra and Hathras	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	13
Muttra and Achnera	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	14
Barilly-Pilibhoost	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	15
PUNJAB									
Punjab, Northern	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	16
Indus Valley	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	17
Amritsar-Pathankote	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	18
BOMBAY									
Dhond and Manmad (a)	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	19
INDIA, GENERAL AND POLITICAL									
RAJPUTANA MALWA									
Rajputana (Delhi District)	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	16,558	37,040	20
Western Rajputana (Agra District)	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	4,237	20,790	21
Holkar	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	400	11,078	22
Etah-Neesuch	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	23
Sindh	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	24
	£	20,037	8,869	7,500	7,820	11,171	46,348	80,004	25

Note.—These details are taken from the Finance and Revenue Accounts

(a) Line worked by Great Indian Peninsula Railway. Only the net traffic receipts representing the Government share are entered on the Finance and Revenue Accounts

Calcutta
22 March 1884 }

F—FAMINE RELIEF AND INSURANCE

33.—PROTECTIVE WORKS, RAILWAYS

	1882-83	TOTAL	REVISED ESTIMATE for 1888-84	BUDGET ESTIMATE for 1884-85
	£	£	£	£
1	183,090	345,203	522,600	306,000
2	-278,338	11,752	-22,100	—
3	2,314	2,314	9,100	6,800
4	235	7,285	98,000	320,000
5	4,426	4,426	13,700	18,800
6	2,096	2,096	27,000	103,000
7	3,598	3,598	50,000	312,500
8	-53,400	108,888	-108,800	73,500
9	-129,101	485,460	625,900	1,138,000

W E Durant, Hon Assistant Examiner,
Public Works Department

L Conway-Gordon, Deputy Accountant General,
Public Works Department.

G.—EXPENDITURE ON PRODUCTIVE PUBLIC WORKS (REVENUE ACCOUNT)

36—STATE RAILWAYS (WORKING EXPENSES)

Indian Currency converted at Rs 10 = £ 1 English Currency in £. Sterling

	1875-76	1876-77	1877-78	1878-79	1879-80	1880-81	1881-82.	1882-83.	TOTAL	REVISED ESTIMATE, 1883-84.	BUDGET ESTIMATE, 1884-85
	£.	£	£	£	£	£.	£	£	£.	£.	£
1	—	—	—	—	—	—	—	—	—	—	200,000
2	9,508	12,890	8,228	-1,738	10,118	9,092	19,893	8,725	184,885	20,000	90,000
3	7,986	8,315	3,793	4,404	6,274	6,970	5,500	5,058	69,888	6,200	5,600
4	—	—	16,402	89,578	122,865	92,519	96,046	107,153	524,568	125,000	140,000
5	4,006	14,190	23,572	32,993	34,327	31,551	34,904	44,052	219,595	66,000	80,000
6	—	—	—	—	18,706	27,563	34,118	27,100	107,487	23,900	25,900
7	—	—	59,903	92,561	77,658	85,953	89,676	98,816	504,652	97,600	117,500
8	—	—	—	—	—	—	—	—	—	—	—
9	—	—	—	—	—	11,435	24,608	49,135	85,172	64,000	70,000
10	3,150	8,668	7,043	11,104	20,733	44,678	44,743	45,442	191,854	21,900	49,000
11	—	—	—	—	—	2,318	3,580	4,769	10,067	1,300	2,800
12	—	—	—	—	—	2,894	22,697	23,256	48,846	—	—
13	1,929	4,919	5,252	5,996	6,681	7,071	10,723	7,511	50,882	38,000	67,500
14	—	—	—	—	—	—	2,083	5,812	7,896	—	—
15	—	—	—	—	—	—	—	—	—	—	4,000
16	13,737	45,068	70,498	86,506	176,473	305,608	286,750	175,327	1,162,257	170,000	175,000
17	—	—	—	109,862	314,896	480,966	405,965	319,130	1,630,809	562,500	337,500
18	—	—	—	—	—	—	—	—	—	4,500	20,000
19	—	—	—	24,569	67,412	47,916	(a)	—	128,907	—	—
20	119,638	160,082	184,831	208,818	247,239	319,167	—	—	—	—	—
21	—	—	—	—	12,471	—	—	—	—	—	—
22	35,715	30,162	—	—	—	—	581,530	688,961	2,887,373	690,000	700,000
23	—	2,885	36,819	67,903	87,796	111,049	—	—	—	—	—
24	—	—	2,137	12,734	12,757	19,898	23,792	23,830	95,118	11,100	18,100
25	105,414	287,989	426,005	740,173	1,215,231	1,607,538	1,686,392	1,484,176	7,890,835	1,691,000	2,032,700

W E Durant, Hon Assistant Examiner,
Public Works Department

L Conway-Gordon, Deputy Accountant General,
Public Works Department.

G.—EXPENDITURE ON PRODUCTIVE PUBLIC WORKS (REVENUE ACCOUNT).

37.—GUARANTEED RAILWAYS (INTEREST AND EXCESS PROFITS).

Indian Currency converted at Rs 10 = £ 1 English Currency in £ Sterling

	1867-68	1868-69	1869-70	1870-71	1871-72	1872-73	1873-74	1874-75	1875-76	1876-77	1877-78	1878-79	1879-80	1880-81	1881-82	1882-83	TOTAL	REVISED ESTIMATE, 1883-84	BUDGET ESTIMATE, 1884-85.
Bombay, Baroda and Central India Railway	337,846	370,202	373,416	388,760	385,971	389,323	384,738	386,560	390,723	397,774	398,004	404,415	406,833	404,909	404,657	433,928	6,395,715		
Eastern Bengal Railway	107,394	126,456	133,607	139,111	149,878	138,306	140,081	146,136	136,348	140,043	174,384	205,207	183,968	193,781	215,935	223,653	2,659,382		
Great Indian Peninsula Railway	630,760	916,610	1,037,704	1,098,409	1,161,070	1,156,974	1,165,368	1,144,041	1,215,960	1,218,417	1,233,422	1,330,500	1,318,866	1,215,877	1,348,511	1,491,474	18,338,194		
Madras Railway	433,364	472,080	489,869	484,000	493,888	499,923	500,173	500,292	506,114	509,159	516,650	523,036	528,441	532,054	531,741	529,822	6,086,765		
Oudh and Behlikhind Railway	33,713	46,886	67,356	104,457	172,081	186,484	211,153	243,536	260,265	260,060	272,162	261,780	286,371	288,177	306,621	338,761	3,372,931	Details not available	Details not available
And. Punjab and Delhi Railway	231,499	442,523	486,082	481,523	547,825	583,700	553,768	559,049	632,722	533,973	565,630	606,888	503,206	500,210	670,251	566,974	8,459,110		
South Indian Railway	33,378	69,797	70,833	140,431	182,966	176,890	177,112	177,067	177,063	177,063	192,245	204,339	207,988	211,640	210,288	211,802	2,617,473		
Debentures issued in exchange to holders of debentures of the Calcutta and South-Eastern Railway	73,067	0,336	4,880	4,930	4,402	4,403	4,402	4,403	-	-	-	-	-	-	-	-	58,623		
Supervision	156,585	260,293	91,350	82,253	66,163	161,056	158,438	55,364	23,313	(a) 43,031	-	-	-	-	-	-	1,185,100		
	£ 3,280,800	4,715,108	3,747,636	3,923,616	3,138,399	3,260,467	3,260,273	3,314,308	3,323,242	3,265,302	3,441,428	3,525,965	3,293,691	3,411,733	3,076,754	3,876,044	51,497,469	3,031,370	3,770,200
East Indian Railway	1,433,183	1,441,547	1,544,369	1,560,038	1,524,591	1,378,386	1,684,961	1,977,024	1,603,074	(a) 1,686,311	3,013,252	3,074,030	3,033,273	266,036	1,068	-	22,217,570	-	-
	£ 4,699,031	4,150,530	4,297,045	4,480,000	4,687,973	4,647,753	4,854,936	5,091,296	4,939,316	4,961,673	5,454,680	5,000,604	5,427,563	3,677,809	3,670,847	3,976,814	73,715,069	3,931,370	3,770,200

(a) Less a credit to the extent of 25,492/ made subsequently in the accounts by the Financial Department. The supervision after 1876-77 was distributed over the Railways

Calcutta,
23 March 1884

W E Dorrant Hon Assistant Examiner,
Public Works Department.

L Conway Gordon, Deputy Accountant General,
Public Works Department.

DETAILED STATEMENT SHOWING INTEREST ON DEBT INCURRED FOR
PRODUCTIVE PUBLIC WORKS, FROM 1867-68 TO 1884-85

[Issue V—No. 1 A., Schedule H]

**DETAILED STATEMENT SHOWING INTEREST ON DEBT INCURRED FOR PRODUCTIVE
PUBLIC WORKS, FROM 1867-68 TO 1884-85**

Indian Currency converted at Rs 10 = £ 1 English Currency in £ Sterling

PROVINCES AND RAILWAYS.	1867-68	1868-69	1869-70	1870-71	1871-72	1872-73	1873-74	1874-75	
STATE RAILWAYS									
INDIA, GENERAL AND POLITICAL									
Rajputana - - - - -	£	£	£	£	£	£	£	£	
Western Rajputana - - - - -	-	-	1,000	2,910	6,258	21,140	45,589	80,654	1
Nemuch - - - - -	-	-	-	-	-	-	-	-	2
Holkar - - - - -	-	-	-	252	978	5,180	14,680	26,996	3
Sindia - - - - -	-	-	-	-	-	-	-	-	4
Stores and Reserve - - - - -	-	-	-	-	481	3,171	8,740	13,693	5
									6
BENGAL									
Behar and Assam - - - - -	-	-	-	-	-	-	-	-	7
Calcutta and South-Eastern - - - - -	-	10,691	21,191	21,052	21,202	21,012	20,600	21,870	8
Nulhati - - - - -	-	-	-	-	800	1,900	1,199	1,145	9
Eastern Bengal - - - - -	-	-	-	-	-	-	-	-	10
Northern Bengal - - - - -	-	-	7	55	153	428	1,251	9,537	11
Tirhoot - - - - -	-	-	-	-	-	-	1,957	3,915	12
Tirhoot Extension - - - - -	-	-	-	-	-	-	-	-	13
Patna-Gya - - - - -	-	-	-	-	-	-	-	-	14
Ranaghat Bhugwangola - - - - -	-	-	-	-	-	-	-	-	15
Dacca and Mymensing - - - - -	-	-	-	-	-	-	-	-	16
Mozafferpore-Hajipur - - - - -	-	-	-	-	-	-	-	-	17
CENTRAL PROVINCES.									
Nagpur-Chhattargarh - - - - -	-	-	-	-	67	2,145	4,708	7,412	18
Wardha Coal - - - - -	-	-	-	-	-	-	-	-	19
BRITISH BURMAH									
Rangoon and Sittang - - - - -	-	-	-	-	-	-	-	-	20
Rangoon and Irrawaddy - - - - -	-	-	-	-	-	-	-	1,584	21
NORTH WESTERN PROVINCES AND OUDEH.									
Ghazipore-Dildernagar - - - - -	-	-	-	-	-	-	-	-	22
Cawnpore Farrakhabad - - - - -	-	-	-	-	-	-	-	-	23
Muttra-Achnera - - - - -	-	-	-	-	-	-	-	-	24
Muttra-Hathras - - - - -	-	-	-	-	-	-	-	-	25
Bareilly Pilibhit - - - - -	-	-	-	-	-	-	-	-	26
Patna-Baratch - - - - -	-	-	-	-	-	-	-	-	27
PUNJAB									
Punjab Northern, Lahore to Rawalpindi and Salt Line - - - - -	13	380	3,636	12,440	22,965	36,937	49,960	62,526	28
Indus Valley - - - - -	-	-	111	1,636	3,906	9,011	26,217	54,052	29
Amritsar Pathankote - - - - -	-	-	-	-	-	-	-	-	30
BOMBAY									
Dhond and Manmad - - - - -	-	-	-	-	961	1,556	3,085	3,208	31
HUBLI and Carwar - - - - -	-	-	62	397	-	-	-	-	32
TOTAL STATE RAILWAYS - - - - -	13	11,071	25,937	38,742	60,621	101,787	177,152	284,528	33
East Indian Railway - - - - -	-	-	-	-	-	-	-	-	34
Irrigation and Navigation Works - - - - -	4,385	13,147	67,671	122,187	166,283	191,329	230,721	279,402	35
Madras Harbour Works - - - - -	-	-	-	-	-	-	-	-	36
GRAND TOTAL - - - - -	4,397	29,218	93,608	160,929	216,854	293,116	407,873	563,930	37

Calcutta,
23 March 1884 }

DETAILED STATEMENT SHOWING INTEREST ON DEBT INCURRED FOR PRODUCTIVE PUBLIC WORKS, FROM 1867-68 TO 1884-85.

Indian Currency converted at Rs 10 = £ 1 English Currency in £ Sterling

	1875-76	1876-77	1877-78	1878-79	1879-80.	1880-81	1881-82	1882-83	TOTAL	REVISED ESTIMATE, 1888-84.	BUDGET ESTIMATE, 1884-86
	£	£	£	£.	£.	£.	£.	£.	£	£	£.
1	91,225	101,106	107,255	131,475	143,664	222,281	353,155	372,160	2,342,608	329,500	343,000
2	-	136	3,678	16,177	37,589						
3	19,953	26,373	33,554	47,528	57,609	128,460	34,063	35,084	180,454	35,500	35,700
4	36,806	45,308	49,749	55,924	54,950						
5	1,187	5,749	12,578	23,606	31,707	36,344	34,063	35,084	180,454	35,500	35,700
6	15,498	15,284	20,231	25,278	16,687	14,155	5,786	161	141,074	1,800	7,300
7	-	-	-	-	-	-	-	-	-	1,600	8,600
8	22,770	32,123	22,100	25,189	25,470	30,498	27,216	27,137	340,060	32,300	37,900
9	1,090	1,087	1,087	1,380	1,560	1,657	1,380	1,380	14,585	1,300	1,300
10	-	-	-	-	-	-	-	-	-	-	33,700
11	33,500	37,526	53,780	78,922	90,399	94,114	84,065	83,837	557,677	87,600	92,700
12	5,866	10,630	15,834	20,297	21,264	25,024	23,060	24,107	152,854	48,000	40,500
13	-	-	-	-	-	-	-	-	16,894	23,433	-
14	-	-	37	5,712	13,024	15,406	14,803	15,433	84,477	15,400	15,800
15	-	-	-	-	-	-	-	25	25	400	800
16	-	-	-	-	-	-	-	1,131	1,131	6,400	16,500
17	-	-	-	-	-	-	-	168	168	4,000	8,400
18	-	157	389	2,900	11,048	21,796	28,207	35,078	99,567	38,300	40,200
19	12,263	16,582	18,471	21,464	21,836	25,686	23,415	24,061	178,221	25,100	26,300
20	-	-	-	-	-	-	4,896	18,384	21,300	84,900	97,500
21	11,360	36,620	38,594	51,665	55,190	56,475	51,008	52,684	345,180		
22	-	-	-	-	1,018	2,353	2,647	2,804	8,722	2,900	2,900
23	-	-	-	1,344	5,791	11,301	12,489	12,804	43,728	30,000	42,000
24	-	-	-	-	120	1,159	2,208	2,548	6,030		
25	-	-	-	-	2,465	4,910	4,341	4,446	16,162	2,700	5,300
26	-	-	-	-	-	-	-	512	512		
27	-	-	-	-	-	-	161	152	313	-	-
28	75,970	89,189	101,919	127,612	141,568	184,735	173,151	180,866	1,266,856	184,000	187,300
29	89,833	138,370	173,137	242,002	267,968	282,081	262,700	272,298	1,812,382	279,500	289,000
30	-	-	-	-	-	-	524	4,693	5,186	13,600	20,700
31	-	-	10,871	32,547	43,250	45,506	39,822	39,985	166,475	40,300	40,900
32	2,207	2,207	2,207	2,484	2,484	-	-	-	64,314	-	-
33	408,116	528,737	605,754	913,512	1,048,700	1,204,960	1,160,445	1,223,702	7,956,476	1,321,000	1,459,200
34	-	-	-	-	34,237	307,244	454,242	486,693	1,352,546	502,800	531,100
35	326,218	367,106	402,186	488,476	519,830	762,770	726,306	784,188	5,447,335	845,700	879,800
36	-	-	-	5,836	13,584	17,071	17,052	20,327	74,770	-74,800	-
37	734,334	805,933	1,067,940	1,407,834	1,616,511	2,381,745	2,339,025	2,517,880	14,731,117	2,594,700	2,870,100

W E Dewart, Hon Assistant Examiner, Public Works Department.

L Conway-Gordon, Deputy Accountant General, Public Works Department

[Issue V.—No 1 A , Schedule K.]

H—EXPENDITURE ON PUBLIC WORKS NOT CLASSED AS PRODUCTIVE

40—STATE RAILWAYS, REVENUE.

RAILWAYS	1882-83	REVISED ESTIMATE, 1883-84.	BUDGET ESTIMATE, 1884-85
	£	£	£
Bhopal State Railway - - - - -	1,976	2,900	2,600
Rewari-Ferozapore State Railway - - - - -	- - -	35,000	45,000
Kandahar State Railway - - - - -	51,412	42,500	42,500
Punjab Northern State Railway - - - - -	84,797	60,000	75,000
Diamond Harbour State Railway - - - - -	2,868	—	—
Kawna-Dhuria State Railway - - - - -	9,039	10,500	10,500
Kokilamukh Railway - - - - -	- - -	- - -	1,100
TOTAL - - - £.	150,122	170,900	176,700

W E Durent, Hon Assistant Examiner,
Public Works Department.

L. Conroy-Gordon, Deputy Accountant General,
Public Works Department.

Calcutta, }
22 March 1884 }

[Issue V.—No. 1 A , Schedule L]

H—EXPENDITURE ON PUBLIC WORKS NOT CLASSED AS PRODUCTIVE

42—SUBSIDIZED RAILWAYS

RAILWAYS	1881-82	1882-83	TOTAL	REVISED ESTIMATE, 1883-84.	BUDGET ESTIMATE, 1884-85.
	£	£	£	£	£
Bengal Central - - - - -	17,527	34,530	52,057	41,000	43,000
Tarkessur - - - - -	- - -	1,000	1,000	5,200	4,800
Bengal and North-Western - - - - -	- - -	3,722	3,722	45,000	32,300
Rohilkhand Kumson - - - - -	- - -	351	351	6,100	8,300
TOTAL - - - £.	17,527	39,663	57,130	100,300	88,400

W E Durent, Hon Assistant Examiner,
Public Works Department.

L. Conroy-Gordon, Deputy Accountant General,
Public Works Department.

Calcutta, }
22 March 1884 }

[Issue V—No. 1 A, Schedule M]

H—EXPENDITURE ON PUBLIC WORKS NOT CLASSED AS PRODUCTIVE

43.—FRONTIER RAILWAYS

RAILWAYS	1879-80	1880-81	1881-82	1882-83	TOTAL	REVISED ESTIMATE, 1883-84	BUDGET ESTIMATE, 1884-85
	£	£.	£.	£	£.	£	£
Punjab Northern State Railway - -	281,070	1,021,508	1,132,906	295,517	2,730,941	-61,500	-15,000
Kandahar State Railway, Upper Section -	916,278	380,440	-695,987	- -	700,729	95,000	-41,530
" " " Lower " -		405,547	171,752	25,292	602,591		
Stores - - - - -	137,064	480,120	-489,989	-61,209	77,886	-56,000	-15,900
TOTAL - - - £	1,334,360	2,293,615	224,682	259,500	4,112,147	-22,500	-73,000

W E Durant, Hon Assistant Examiner,
Public Works Department.

L. Conway-Gordon, Deputy Accountant General,
Public Works Department.

Calcutta, }
22 March 1884 }

[Issue V—No 1 A., Schedule N]

N—EXPENDITURE ON PRODUCTIVE PUBLIC WORKS (CAPITAL ACCOUNT).

50—STATE RAILWAYS

Indian Currency converted at Rs 10 = £ 1 English Currency in £. Sterling

RAILWAYS	1867-68	1868-69	1869-70	1870-71	1871-72	1872-73	1873-74	1874-75	
BENGAL									
Calcutta and South Eastern	-	₹534,540	13,049	9,590	—2,077	—7,423	—13,147	76,647	1
Nalhati	-	-	-	-	30,000	-	—46	—2,637	2
Northern Bengal	-	-	363	2,046	2,860	10,774	30,487	383,803	3
Tirhoot	-	-	-	-	-	-	97,867	-	4
Tirhoot Extension	-	-	-	-	-	-	-	-	5
Patna and Gya	-	-	-	-	-	-	-	-	6
Ranaghat Bhugwangola	-	-	-	-	-	-	-	-	7
Dacca-Mymensingh	-	-	-	-	-	-	-	-	8
Mozufferpore Hajpore	-	-	-	-	-	-	-	-	9
Behar-Assam	-	-	-	-	-	-	-	-	10
Eastern Bengal Railway	-	-	-	-	-	-	-	-	11
BRITISH BURMAH									
Rangoon and Irrawaddy Valley	-	-	-	-	-	-	-	79,229	12
Rangoon and Sittang Valley	-	-	-	-	-	-	-	-	13
CENTRAL PROVINCES									
Nagpur-Chhattisgarh	-	-	-	-	-	-	-	-	14
Wardha Coal	-	-	-	-	3,359	100,560	20,565	101,628	15
NORTH WESTERN PROVINCES AND OUDH:									
Ghanpur-Dildarnagar	-	-	-	-	-	-	-	-	16
Cawnpore-Farukhabad	-	-	-	-	-	-	-	-	17
Muttra Achneyra	-	-	-	-	-	-	-	-	18
Muttra-Hathras	-	-	-	-	-	-	-	-	19
Patna Baraitch	-	-	-	-	-	-	-	-	20
Bareilly-Pilibhit	-	-	-	-	-	-	-	-	21
PUNJAB									
Punjab Northern	594	17,358	144,898	295,283	280,482	368,543	282,478	345,814	22
Indus Valley	-	-	5,541	70,703	45,843	206,362	653,949	737,822	23
Amritsar-Fathankote	-	-	-	-	-	-	-	-	24
BOMBAY									
Dhond and Manmad	-	-	-	-	-	-	-	-	25
Bellary Hubli	-	-	3,066	13,682	14,486	15,274	8,660	-	26
INDIA, GENERAL									
Rajputana Malwa	-	-	50,022	45,479	221,888	422,681	796,805	956,952	27
Holkar	-	-	-	12,589	23,737	186,328	298,997	256,480	28
Sindia	-	-	-	-	-	-	-	1,784	29
Stores	-	-	-	-	24,042	110,450	168,010	74,658	30
Reserve	-	-	-	-	-	-	-	-	31
TOTAL	£ 594	552,398	190,870	449,372	644,620	1,413,649	2,354,625	3,014,180	32

(a) Purchase money paid to Company

(b) Includes 1,023,700 £ to be paid to the Company for debentures, &c., on Government taking over the Railway on 1st July 1884

Calcutta,
22 March 1884 }

N.—EXPENDITURE ON PRODUCTIVE PUBLIC WORKS (CAPITAL ACCOUNT).

50.—STATE RAILWAYS.

Indian Currency converted at Rs 10 = £ 1 English Currency in £ Sterling

	1875-76	1876-77	1877-78	1878-79	1879-80	1880-81	1881-82	1882-83	TOTAL to End of 1882-83.	REVISED ESTIMATE, 1883-84	BUDGET ESTIMATE, 1884-85
	£	£	£	£	£	£	£	£	£	£	£
1	—31,640	—708	—	14,069	—1,609	116,795	—3,185	—756	678,045	260,400	16,100
2	—148	—	—	6,968	608	—260	—976	—508	33,001	350	—700
3	318,854	377,945	433,756	386,180	123,602	38,660	—13,822	880	2,096,358	184,800	75,000
4	97,576	155,616	89,568	20,850	22,136	109,971	—34,145	86,475	645,914	36,084	35,000
5	—	—	—	—	—	7,613	301,082	226,806	535,501		
6	—	—	1,878	250,105	74,890	30,981	27,749	237	385,830	—1,500	9,500
7	—	—	—	—	—	—	—	1,250	1,250	18,750	—
8	—	—	—	—	—	—	—	47,815	47,815	226,100	266,200
9	—	—	—	—	—	—	—	5,881	5,881	185,916	38,530
10	—	—	—	—	—	—	—	—	—	80,000	270,000
11	—	—	—	—	—	—	—	—	—	—	(b)1,123,700
12	409,518	353,508	245,178	121,375	35,257	18,538	25,191	58,628	1,346,422	371,950	39,000 221,050
13	—	—	—	—	—	—	228,721	360,781	539,502		
14	—	7,850	3,434	106,300	255,755	213,209	237,288	106,231	930,067	54,900	40,700
15	140,894	75,076	19,380	11,027	7,844	87,130	15,810	16,511	609,784	36,150	20,500
16	—	—	—	—	45,233	14,121	8,633	4,202	72,189	—	300
17	—	—	—	59,715	137,964	106,895	15,314	415	320,303	400	—
18	—	—	—	—	5,311	40,870	18,056	—1,326	62,911	502,750	99,200
19	—	—	—	—	109,562	—915	—251	5,515	113,911		
20	—	—	—	—	—	—	7,602	—7,602	—	—	—
21	—	—	—	—	—	—	—	21,167	21,167	93,400	32,800
22	326,382	334,610	301,852	273,873	346,372	1,095,004	79,247	56,539	4,549,929	100,900	61,400
23	1,006,210	960,648	1,282,691	816,105	337,939	284,797	317,787	162,082	6,888,479	196,000	280,400
24	—	—	—	—	—	—	25,179	186,744	209,923	260,500	95,000
25	—	—	543,325	359,469	116,245	—24,941	2,485	5,677	1,002,460	12,000	13,700
26	—	—	—	—	—	—55,197	—	—	—	—	—
27	537,245	314,540	539,137	901,178	1,040,256	1,311,792	613,462	314,852	8,068,289	339,100	344,800
28	283,973	145,673	71,920	—73,865	30,546	13,077	15,266	6,847	1,271,568	3,800	10,000
29	55,781	172,329	174,048	241,264	118,791	70,209	34,756	16,264	885,226	5,100	5,000
30	20,539	—31,226	278,621	—166,723	—126,199	—76,008	—262,574	—19,141	—5,551	99,950	178,410
31	—	—	—	—	—	—	—	—	—		
32	3,165,184	2,865,861	3,984,968	3,327,898	2,680,493	3,402,331	1,656,675	1,662,466	31,366,174	3,069,808	3,275,600

W E DAVENPORT, Hon Assistant Examiner,
Public Works Department.

L. CONWAY-GORDON, Deputy Accountant General,
Public Works Department.

[Issue V—No. 1 A ; Schedule O.]

N.—EXPENDITURE ON PRODUCTIVE PUBLIC WORKS, CAPITAL ACCOUNT.

51—IRRIGATION AND NAVIGATION.

Indian Currency converted at Rs. 10 = £. 1 English Currency in £. Sterling

IRRIGATION WORKS	Sanctioned Estimates (excluding Indirect Charges)	EXPENDITURE DURING THE YEARS								
		1907-08	1908-09	1909-10	1910-11	1911-12.	1912-13.	1913-14	1914-15.	
BENGAL										
Orissa Project	8,110,218	-	31,928	969,267	98,948	90,479	191,806	156,859	100,182	1
Midnapore Series	224,908	-	12,350	244,143	46,970	46,566	22,284	48,207	83,247	2
Tidal Canal	177,276	-	1,946	190,937	17,478	9,898	25,088	14,378	244	3
Sone Project	2,788,870	-	3,804	98,548	154,434	166,871	245,804	958,200	378,591	4
Total BENGAL	6,001,253	-	49,038	1,471,728	241,264	283,408	447,419	813,009	409,964	5
NORTH WESTERN PROVINCES AND OUDH										
Ganges Canal	9,228,443	27,268	51,264	53,521	29,455	23,784	40,010	48,280	80,897	6
Agra Canal	800,822	2,713	20,047	27,211	78,984	99,258	117,202	116,978	98,280	7
Lower Ganges Canal	2,779,481	-	648	4,275	4,756	2,108	42,222	264,247	201,547	8
Eastern Jumna Canal	344,191	-	-	-	-	-	-	-	-	9
Total NORTH-WESTERN PROVINCES AND OUDH	6,640,916	30,561	91,029	145,467	201,288	184,148	269,914	429,605	428,828	10
PUNJAB										
Western Jumna Canal	1,079,050	1,566	16,239	15,496	18,822	17,264	10,220	22,262	47,978	11
Bari Doab Canal	1,268,769	8,923	13,160	25,217	56,002	51,241	34,371	20,145	28,514	12
Sikhind Canal	2,079,228	15,102	9,847	62,067	108,674	229,558	-7,218	86,108	121,673	13
Lower Sohan and Feroz Canal	72,910	-	-	-	-	-	-	-	-	14
Chand Canal	228,559	-	-	-	-	-	-	-	-	15
Sidhali Canal	-	-	-	-	-	-	-	-	-	16
Total PUNJAB	5,118,474	23,657	39,266	98,460	174,288	236,878	26,847	129,002	206,404	17
MADRAS										
Godavari Delta System	1,106,809	9,986	22,409	18,258	22,622	21,054	31,008	26,976	42,094	18
Kistna Delta System	1,289,978	20,097	25,690	18,257	72,009	11,678	10,204	10,807	18,708	19
Sangam Ancient System	269,644	-	-	-	-	-	-	-	-	20
Cauvery Delta System	168,022	3,896	10,214	1,415	4,311	12,219	5,946	9,866	285	21
Sriekunkuntham Ancient System	128,159	140	12,963	26,206	12,095	12,721	16,917	7,488	5,684	22
Pennor Ancient System	123,921	7,629	9,916	9,979	9,498	9,402	3,422	2,968	5,514	23
Kurnool-Cuddapah Canal	1,775,292	-	-	-	-	-	-	-	-	24
Barru Tank	27,006	-	-	-	-	-	-	-	-	25
Total MADRAS	5,025,968	47,748	80,298	80,005	20,453	66,660	68,106	51,167	70,019	26
BOMBAY										
Begari Canal	102,885	-	7,945	3,865	6,709	5,477	4,261	7,221	2,207	27
Eastern Nera Works	508,030	5,278	4,242	516	-3,400	4,608	5,961	5,526	1,546	28
Desert Canal	126,664	-	-	-	-	-	-	-	-	29
Hathmati Canal	49,470	-	-	-	7,279	19,128	5,496	5,917	3,201	30
Lower Panjhra River Works or Mukti Nulla Reservoir	24,589	-	-	11,200	14,428	1,244	261	1,122	961	31
Kidav River Works (formerly called Falghair Canal)	59,222	104	3,412	3,013	4,125	2,121	2,042	1,224	722	32
Pravara River Works—Lakh Canal	27,219	19,229	4,260	1,879	-	487	973	276	6	33
Mutha Storage Lake and Canal	558,206	-	85,622	72,259	92,250	59,109	56,923	44,691	24,220	34
Kherak Tank	122,224	17,163	41,912	24,677	19,217	5,284	3,122	1,289	444	35
Krishna Canal	72,723	3,242	4,768	465	377	1,023	1,211	522	49	36
Total BOMBAY	1,718,285	42,688	102,234	117,268	142,278	25,716	80,109	69,094	44,849	37
Add and Deduct,—										
Outlay on Works transferred to Ordinary Stores and Reserve	-	46,000	166,204	99,779	3,209	54,943	-62,773	-926	17,003	38
	-	-	-	-	-	-	104	211	49	39
GRAND TOTAL	26,600,493	219,225	468,849	2,007,261	718,428	963,654	770,220	1,160,222	1,225,291	40

Note.—The distribution of the yearly outlay on Irrigation Works in Madras is subject to revision on the accounts being finally completed.

Calcutta, }
22 March 1914. }

N.—EXPENDITURE ON PRODUCTIVE PUBLIC WORKS, CAPITAL ACCOUNT

51.—IRRIGATION AND NAVIGATION.

Indian Currency converted at Rs. 10 = £. 1 English Currency in £. Sterling.

EXPENDITURE DURING THE YEARS										TOTAL Expenditure to end of 1892-93.	REVISED ESTIMATE, 1893-94.	BUDGET ESTIMATE, 1894-95.	
1876-77	1877-78	1878-79	1879-80	1880-81	1881-82.	1882-83.	1883-84.	1884-85.	1885-86.				
1	105,048	75,272	46,614	59,740	46,776	45,939	33,786	32,301	36,406	1,996,440	75,975	96,000	
2	83,672	86,458	21,669	27,817	16,053	23,916	23,458	11,189	12,179	794,410	17,500	10,000	
3	94	-1,492	-	-	-	2,292	-	-	-	377,221	-	-	
4	287,214	917,707	160,133	179,583	93,970	82,140	8,864	71,216	87,254	2,860,959	57,725	54,000	
5	690,154	328,085	337,485	254,449	161,408	160,544	77,268	116,536	85,929	5,231,729	150,000	160,000	
6	58,255	95,780	82,901	67,000	91,889	121,081	30,341	14,167	27,658	2,601,843	81,500	25,000	
7	59,143	41,903	14,863	9,271	2,181	3,003,119	2,292	4,838	4,141	706,900	12,500	13,000	
8	363,287	197,039	178,108	155,797	143,018	172,828	269,210	168,488	88,659	3,699,831	81,750	86,700	
9	-	-	-	-	-	154,691	-	4,736	4,195	378,104	8,300	13,500	
10	309,287	335,743	875,032	337,988	708,081	100,349	3,365,684	132,169	362,263	6,062,948	118,600	140,000	
11	49,184	50,738	86,387	79,415	41,067	49,700	234,298	43,697	54,316	836,203	75,700	77,408	
12	32,700	24,001	14,384	19,916	388	525	1,180,119	-1,477	-5,567	1,601,013	16,500	13,700	
13	146,466	105,679	114,797	180,348	106,471	209,228	2,536	185,710	187,740	1,779,160	90,500	97,000	
14	-	-	-	-	-	-	-	-	485	485	9,500	21,800	
15	-	-	-	-	-	-	-	-	736	736	82,600	89,000	
16	-	-	-	-	-	-	-	-	494	494	9,600	24,900	
17	280,261	160,338	314,488	263,626	191,866	399,535	1,267,563	227,840	121,334	4,111,865	230,400	285,700	
18	44,280	35,910	25,085	10,238	19,265	13,773	9,916	511,005	49,345	22,004	693,096	30,634	45,800
19	8,649	5,887	5,419	9,120	3,904	8,330	29,538	11,478	20,094	267,677	44,920	58,500	
20	-	-	-	-	-	805,821	16,018	57,583	75,715	54,087	60,900	60,900	
21	54	-	655	-	8,574	3,319	6,113	-	8,049	104,766	18,765	26,000	
22	4,711	4,548	1,921	1,269	9,311	98,015	37,011	105	1,968	123,808	6,484	4,150	
23	-90	103	294	-	718	1,029	-	-	-	145,636	-	-	
24	-	-	-	-	-	87,774	-	-	1,762,863	1,762,562	15,800	-	
25	-	-	-	-	-	-	-	-	-	1,961	1,961	8,500	
26	87,618	34,005	28,280	24,047	20,207	21,986	39,513	47,498	1,861,577	8,721,333	117,600	119,000	
27	10,068	-	6,301	9,818	4,965	3,988	40,145	7,693	9,358	128,328	9,000	9,200	
28	-35	-18	-	-	1,088	404	15,296	19,037	19,767	277,691	56,640	57,905	
29	-	-	-	-	-	334,979	8,018	96,544	14,045	94,207	8,040	6,400	
30	9,884	2,494	1,798	446	79	181	8,850	127	168	48,489	716	-	
31	1,129	7,868	40	116	508	-2,390	8,840	156	56	40,803	-	-	
32	289	123	68	1,517	819	1,019	6,489	6,069	4,901	25,823	13,647	3,000	
33	8	-	92	686	740	274	11,853	191	60	64,627	139	128	
34	28,655	37,896	16,694	18,998	18,816	5,411	15,509	6,878	9,228	367,805	5,684	13,168	
35	478	9,820	1,928	1,631	1,680	1,277	483	681	367	121,511	237	889	
36	444	-	-37	-1	103	516	89,367	812	1,004	77,187	1,378	1,000	
37	40,305	64,183	26,065	34,267	66,176	10,923	20,685	296,511	60,815	1,089,901	64,004	70,800	
38	1,853	-101	18,357	41,376	37,800	-356,997	-	-	-	-	-12,006	94,200	
39	-18	-96	-96	-	-	-	-	-	-	-	-	-	
40	1,105,443	943,493	806,064	794,654	598,837	3,109,027	1,184,888	3,334,368	20,766,858	252,130	248,800		

The Revised Estimate is sanctioned for 123,000/ the reduction of 10,000/ by projects has not been indicated; hence the amount has been shown as a deduction under Reserve.

The Revised Estimate is passed for 175,534/ the reduction of 2,995/ by projects has not been indicated; hence the amount has been shown as a reduction under Reserve.

The Budget Estimate is passed for 196,600/ the increase of 400/ by projects has not been indicated; hence the amount has been shown as an increase under Reserve.

* This represents the previous outlay incurred from Ordinary Funds amounting to £ 5,134,306 + 619,654 = 5,753,960 which was transferred to Productive during these years.
 Mr E. J. Dorend Hon. Assistant Examiner Public Works Department. L. Cooney-Gordon, Deputy Accountant General, Public Works Department.

[Issue V.—No. 1 B]

ABSTRACT STATEMENT OF PUBLIC WORKS REVENUE FROM 1867-68 TO DATE.

Indian Currency converted at Rs 10 = £ 1 English Currency in £. Sterling.

	Reference to Detailed Statements.	1867-68	1868-69	1869-70.	1870-71	1871-72	1872-73	1873-74	1874-75	
C—POST OFFICE, TELEGRAPH, AND MINT										
XIII Telegraph - - - -	L.	£ 241,947	£ 274,497	£ 257,134	£ 247,010	£ 228,368	£ 249,802	£ 250,658	£ 226,479	1
G—REVENUE FROM PRODUCTIVE PUBLIC WORKS										
XXV State Railways (Gross Receipts)	A.	-	13,282	6,060	7,576	2,768	16,539	39,914	130,988	2
East Indian Railway - -	-	-	-	-	-	-	-	-	-	3
XXVI Guaranteed Railways (Net Traffic Receipts)	B.	2,247,169	2,436,731	2,943,843	2,859,328	1,581,941	1,305,444	1,569,671	1,930,669	4
East Indian Railway (Net Traffic Receipts)	-	-	-	-	-	1,608,148	1,054,939	2,023,443	2,171,005	5
XXVII Irrigation and Navigation. (Direct Receipts.)	-	366,488	385,068	450,488	406,408	380,123	353,308	377,018	380,927	6
Madras Irrigation and Canal Company	-	977	1,018	1,008	74	-8,205	-6,585	-10,635	-7,034	7
XXVIII Portion of Land Revenue due to Irrigation.	-	-	-	-	-	-	-	-	-	8
	£	2,614,628	2,736,099	3,403,412	3,273,381	3,669,772	3,328,718	4,019,411	4,845,448	9
H—RECEIPTS FROM PUBLIC WORKS NOT CLASSED AS PRODUCTIVE										
XXIX. State Railways - - -	C.	-	-	-	-	-	-	-	-	10
XXX Subsidized Railways - -	D.	-	-	-	-	-	-	-	-	11
XXXI. Irrigation and Navigation -	-	68,501	127,419	151,108	140,730	98,811	124,417	163,674	146,491	12
XXXII Military Works - - -	-	724,385	822,048	682,707	751,205	536,746	541,205	*17,203	*16,075	13
XXXIII. Civil Buildings, Roads and Services	-	-	-	-	-	-	-	666,839	510,523	14
	£.	812,886	949,422	833,815	891,935	635,557	665,622	749,819	673,669	15
TOTAL REVENUE - - -	-	3,689,461	3,685,521	4,404,361	4,412,326	4,427,697	4,144,142	5,019,866	5,605,611	16
Add— Productive Public Works Expenditure formerly treated as Ordinary transferred to Capital by credit as an Extraordinary Receipt.	-	-	-	-	-	7	-	-	-	17
GRAND TOTAL - - - £.	-	3,689,461	3,685,521	4,404,361	4,412,326	4,427,697	4,144,142	5,019,866	5,605,611	18

Note.—Excludes the transactions pertaining to Foreign States, municipal, cantonment, port, island labour, Nizamut Deposits, bazaar, towns, and such local funds, over which the Government of India has no legal control, and the subscribed capital of guaranteed and assisted companies.

Calcutta, }
23 March 1884 }

ABSTRACT STATEMENT OF PUBLIC WORKS REVENUE FROM 1867-68 TO DATE

Indian Currency converted at Rs 10 = £ 1 English Currency in £ Sterling

	1875-76	1876-77.	1877-78.	1878-79.	1879-80	1880-81	1881-82.	1882-83.	TOTAL	REVISED ESTIMATE, 1883-84.	BUDGET ESTIMATE, 1884-85.
	£	£	£.	£.	£	£	£	£	£.	£	£.
1	309,040	841,327	858,490	426,604	505,552	539,087	469,208	545,315	5,530,428	525,100	573,500
2											
3											
4	292,835	380,668	582,077	976,828	1,548,728	2,268,905	2,556,542	2,846,327	11,473,047	3,087,300	3,716,900
5	-	-	-	-	1,177,692	4,252,841	4,710,506	4,601,288	14,742,327	5,030,300	4,850,200
6	2,452,481	2,641,762	2,627,968	2,709,998	2,476,347	2,894,658	3,615,479	3,582,048	60,156,623	3,565,000	3,613,000
7	1,807,729	2,445,879	2,965,491	2,491,308	2,146,287	18,890	146	-			
8	428,879	425,301	502,981	613,270	708,041	639,144	865,799	989,983			
9	-17,765	-3,329	-8,750	8,886	15,799	-7,650	-8,634	-5,624	-59,564	-	-
10	-	-	(a)156,369	(a)126,934	602,398	797,319	491,230	489,081	2,643,321	542,800	508,400
11	4,964,959	5,890,281	7,826,136	6,927,224	8,675,242	10,864,102	12,230,858	12,224,101	97,087,787	12,969,800	13,631,100
12											
13	-	-	-	-	-	-	-	138,792	138,792	174,900	196,100
14	-	-	-	-	-	-	2,290	3,680	5,970	2,700	-
15	163,065	177,269	168,104	168,610	193,067	197,908	131,239	139,057	2,379,509	142,600	140,700
16	*16,478	39,551	39,237	39,554	38,255	36,727	50,298	44,306	8,762,269	36,700	37,700
17	505,428	512,706	714,790	531,522	464,811	510,588	543,972	504,747			
18	681,001	729,226	920,131	739,606	696,138	745,221	727,799	830,582	12,286,530	828,200	917,700
19											
20	5,950,000	6,900,734	8,104,697	8,093,613	9,876,927	12,148,410	13,497,865	13,599,998	114,904,725	14,321,100	15,122,300
21	-	-	-	-	-	5,640,728	640,608	15,214	6,296,550	-	-
22											
23	5,950,000	6,900,734	8,104,697	8,093,613	9,876,927	17,789,138	14,068,473	13,615,212	121,201,275	14,321,100	15,122,300

* The sums credited to Military Works are the amounts brought to account by the Inspector General of Military Works. The distribution of the Revenue between Military Works and Civil Buildings was not made till 1876-77
(a) Only for Northern India.

W. E. Durant
Hon. Assistant Examiner.

L. Conway-Gordon, Deputy Accountant General,
Public Works Department.

[Issue V.—No. 1 B., Schedule A.]

G.—REVENUE FROM PRODUCTIVE PUBLIC WORKS.

XXV.—STATE RAILWAYS—(GROSS RECEIPTS).

Indian Currency converted at Rs. 10 = £. 1. English Currency in £. Sterling.

RAILWAYS.	1867-68.	1868-69.	1869-70.	1870-71.	1871-72.	1872-73.	1873-74.	1874-75.	
BENGAL:	£.	£.	£.	£.	£.	£.	£.	£.	
Calcutta and South-Eastern - - -	-	15,283	8,060	7,576	3,706	16,533	9,835	0,861	1
Nalhati - - - - -	-	-	-	-	-	-	5,855	6,493	2
Tirhoot - - - - -	-	-	-	-	-	-	-	-	3
Northern Bengal - - - - -	-	-	-	-	-	-	-	-	4
Patna and Gya - - - - -	-	-	-	-	-	-	-	-	5
Eastern Bengal - - - - -	-	-	-	-	-	-	-	-	6
BRITISH BURMAH									
Rangoon and Sittang - - - - -	-	-	-	-	-	-	-	-	7
Rangoon and Irrawaddy - - - - -	-	-	-	-	-	-	-	-	8
CENTRAL PROVINCES									
Wardha Coal - - - - -	-	-	-	-	-	-	-	8,112	9
Nagpur-Chhattisgarh - - - - -	-	-	-	-	-	-	-	-	10
NORTE WESTERN PROVINCES AND OUDH									
Cawnpore-Ferukhabad - - - - -	-	-	-	-	-	-	-	-	11
Muttra and Hathras - - - - -	-	-	-	-	-	-	-	-	12
Muttra-Achnare - - - - -	-	-	-	-	-	-	-	-	13
Ghaziपुर-Dildarnagar - - - - -	-	-	-	-	-	-	-	-	14
Bazelly-Pilibhit - - - - -	-	-	-	-	-	-	-	-	15
PUNJAB									
Punjab Northern - - - - -	-	-	-	-	-	-	-	-	16
Indus Valley - - - - -	-	-	-	-	-	-	-	-	17
Amritsar-Pathankote - - - - -	-	-	-	-	-	-	-	-	18
BOMBAY									
Dhond and Manmad, Net Traffic Receipts	-	-	-	-	-	-	-	-	19
INDIA, GENERAL AND POLITICAL									
Rajputana-Malwa System - - - - -	-	-	-	-	-	-	31,726	110,521	20
Scindia - - - - -	-	-	-	-	-	-	-	-	21
GRAND TOTAL - - - - -	-	15,282	8,060	7,576	3,706	10,533	39,914	130,986	22

Calcutta, }
22 March 1884 }

G.—REVENUE FROM PRODUCTIVE PUBLIC WORKS.

XXV.—STATE RAILWAYS—(GROSS RECEIPTS).

Indian Currency converted at Rs 10 = £. 1 English Currency in £. Sterling

	1875-76	1876-77.	1877-78.	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.	TOTAL.	REVISED ESTIMATE, 1883-84	BUDGET ESTIMATE, 1884-85
	£.	£.	£.	£.	£.	£.	£.	£.	£.	£.	£.
1	10,486	9,775	12,616	13,509	13,548	14,667	15,962	16,520	175,014	31,600	32,000
2	7,178	8,008	9,130	8,532	9,302	6,732	6,787	7,406	80,102	8,000	7,600
3	4,804	21,358	24,324	44,980	47,003	54,338	57,878	70,981	386,355	95,000	130,000
4	-	-	17,111	100,289	146,781	170,325	192,741	227,960	864,237	211,000	240,000
5	-	-	-	-	33,904	49,828	53,037	39,834	177,363	47,000	50,000
6	-	-	-	-	-	-	-	-	-	-	430,000
7	-	-	-	-	-	-	-	-	-	-	-
8	-	-	62,676	87,561	168,823	141,146	152,938	158,688	721,727	165,000	200,000
9	2,936	3,085	10,639	11,373	22,775	24,586	52,980	67,327	205,373	79,000	79,000
10	-	-	-	-	-	15,905	41,870	85,890	143,665	130,000	140,000
11	-	-	-	-	-	4,594	33,340	35,488	73,420	-	-
12	3,323	8,977	33,549	10,822	12,335	14,012	13,189	11,709	107,916	57,500	100,000
13	-	-	-	-	-	-	2,265	7,138	9,363	-	-
14	-	-	-	-	-	1,788	4,113	4,847	10,748	3,500	5,000
15	-	-	-	-	-	-	-	-	-	-	6,000
16	22,037	50,154	76,413	108,400	182,537	401,140	327,018	231,908	1,400,327	245,000	255,000
17	-	-	-	113,921	385,633	682,027	542,560	519,279	2,243,440	647,500	607,500
18	-	-	-	-	-	-	-	-	-	3,200	30,000
19	-	-	-	25,041	50,959	52,988	14,048	15,909	159,085	18,800	18,800
20	941,401	276,031	294,100	423,568	517,033	611,949	1,012,548	1,113,325	*4,654,672	1,320,000	1,350,000
21	-	-	1,319	10,812	10,556	23,880	30,863	32,030	110,460	25,900	25,000
22	202,833	380,698	382,077	976,828	1,546,728	2,268,906	2,556,542	2,646,327	11,473,047	3,067,300	3,716,900

* Inclusive of outlay incurred on Holkar and Neemuch Sections.

W. E. Dewart, Hon. Assistant Examiner,
Public Works Department.L. Conway-Gordon, Deputy Accountant General,
Public Works Department.

[Issue V.—No 1 B, Schedule B]

G.—REVENUE FROM PRODUCTIVE PUBLIC WORKS.

XXVI GUARANTEED RAILWAYS (NET TRAFFIC RECEIPTS).

Indian Currency converted at Rs. 10 = £ 1 English Currency in £ Sterling

RAILWAYS	1867-68	1868-69	1869-70	1870-71	1871-72.	1872-73	1873-74	1874-75	
	£	£.	£.	£.	£.	£	£	£	
Eastern Bengal - - - -	119,600	99,440	94,613	115,770	94,141	96,451	126,029	207,440	1
Calcutta and South-Eastern -	-3,584	-1,810	-	-	-	-	-	-	2
Madras - - - - -	260,805	336,674	310,763	253,604	273,970	312,808	374,548	192,049	3
South Indian - - - - -	29,997	34,940	28,120	32,329	27,686	48,578	48,684	40,338	4
Bombay, Baroda, and Central India	83,303	112,353	143,832	129,152	293,554	179,094	232,992	800,012	5
Great Indian Peninsula - -	404,865	581,878	477,252	666,914	906,167	657,061	710,335	833,550	6
Oudh and Rohilkhand									
Open line - - - - -	3,592	8,668	5,241	-30,873	11,504	10,466	35,543	94,619	7
Extension - - - - -	-	-	-	-	-	-	-	-	8
Sind, Punjab and Delhi - -	61,166	61,281	205,518	101,340	-22,051	-96,599	162,163	291,651	9
Adjustment on account of ex- change not distributed by Rail- ways	(a) +202,622	(a) +206,522	(b) +6,116	(b) -3,534	(b) -3,030	(b) -2,415	(b) -2,223	-	10
East Indian - - - - -	1,084,797	1,119,347	1,672,393	1,594,626	1,606,148	1,654,933	2,023,443	2,171,905	11
TOTAL - - - £	2,247,163	2,436,731	2,943,843	2,859,328	3,188,089	2,860,377	3,613,114	4,131,564	12

(a) Total gain by exchange on all lines, the details by individual lines are at present not available.

(b) Adjustments made in the revised classification of the Finance and Revenue Accounts, the details of which are at present not available

Calcutta,
22 March 1884 }

[Issue V—No 1 B, Schedules C. and D.]

H—RECEIPTS FROM PUBLIC WORKS NOT CLASSED AS PRODUCTIVE

XXIX. STATE RAILWAYS.

RAILWAYS	1882-83	REVISED ESTIMATE, 1883-84	BUDGET ESTIMATE, 1884-85
	£	£	£
Bhopal State Railway - - - -	1,438	2,400	2,800
Rewari-Ferozapore Railway - -	-	46,000	70,000
Kandahar State Railway - - - -	48,390	42,500	42,500
Punjab Northern State Railway -	72,850	70,000	65,000
Diamond Harbour State Railway -	5,487	*	*
Kawra-Dhurla State Railway - -	10,527	14,000	14,000
Kokilamukh Railway - - - - -	-	-	1,800
TOTAL - - - £	138,792	174,900	196,100

* Included in Calcutta and South-Eastern State Railway

Calcutta,
22 March 1884 }

G—REVENUE FROM PRODUCTIVE PUBLIC WORKS.

XXVI. GUARANTEED RAILWAYS (NET TRAFFIC RECEIPTS)

Indian Currency converted at Rs 10 = £. 1 English Currency in £ Sterling

	1875-76	1876-77	1877-78	1878-79	1879-80	1880-81	1881-82.	1882-83	TOTAL	REVISED ESTIMATE, 1883-84	BUDGET ESTIMATE, 1884-85
	£	£	£	£.	£.	£	£	£	£	£.	£.
1	121,756	201,976	306,458	231,567	251,469	268,496	347,601	375,984	3,060,791	235,000	72,000
2	-	-	-	-	-	-	-	-	-5,394	-	-
3	205,126	288,301	356,396	162,534	226,435	197,631	215,045	249,207	4,115,986	245,000	240,000
4	73,424	104,493	159,192	77,698	95,320	137,177	127,569	136,080	1,201,025	140,000	141,000
5	288,445	332,283	411,586	315,381	329,041	377,005	557,358	521,574	4,606,965	700,000	680,000
6	1,062,407	1,350,978	1,757,881	1,346,828	954,334	1,203,836	1,844,503	1,771,762	16,537,551	1,650,000	1,750,000
7	114,140	146,405	199,402	229,451	154,069	207,199	205,496	155,178	1,550,100	260,000	250,000
8	-	-	-	-	-	-	-	-	-		
9	580,185	217,326	437,053	346,739	465,679	503,309	317,907	372,171	3,882,269	135,000	480,000
10	-	-	-	-	-	-	-	-	404,058	-	-
11	1,807,729	2,445,879	2,965,491	2,491,308	2,146,837	18,890	146	-	24,803,272	-	-
12	4,260,210	5,087,641	6,593,459	5,201,306	4,622,584	2,913,543	3,615,625	3,582,046	60,156,623	3,365,000	3,613,000

W E Durant, Hon Assistant Examiner,
Public Works DepartmentL Conway-Gordon, Deputy Accountant General,
Public Works Department.

H—RECEIPTS FROM PUBLIC WORKS NOT CLASSED AS PRODUCTIVE

XXX SUBSIDIZED RAILWAYS

RAILWAY	1881-82	1882-83	TOTAL.	REVISED ESTIMATE, 1883-84	BUDGET ESTIMATE, 1884-85
	£.	£.	£.	£	£.
Bengal Central Railway - - - - -	2,290	3,680	5,970	2,700	-

W E Durant, Hon Assistant Examiner,
Public Works Department.L Conway-Gordon, Deputy Accountant General,
Public Works Department.

[Issue V—No 2 A]

ABSTRACT OF PUBLIC WORKS OPERATIONS FROM YEAR 1867-68 TO DATE

CAPITAL OR BLOCK EXPENDITURE

Indian Currency converted at Rs. 10 = £ 1. English Currency in £. Sterling

WORKS of which the Capital is shown in Accounts of the Empire	1867-68	1868-69	1869-70	1870-71	1871-72.	1872-73.	1873-74.	1874-75	
PRODUCTIVE.									
STATE RAILWAYS	£	£	£.	£	£	£	£.	£	
State Railways - - - -	594	552,398	190,870	449,372	644,620	1,413,649	2,354,625	3,014,180	1
East Indian Railway - - -	-	-	-	-	-	-	-	-	2
TOTAL STATE RAILWAYS - £.	594	552,398	190,870	449,372	644,620	1,413,649	2,354,625	3,014,180	3
IRRIGATION AND NAVIGATION									
Irrigation and Navigation - -	219,256	468,840	3,007,361	713,438	983,854	770,920	1,198,682	1,235,301	4
OTHER PUBLIC WORKS									
Miscellaneous Public Improvements (Madras Harbour Works) - - -	-	-	-	-	-	-	-	-	5
GRAND TOTAL, PRODUCTIVE - £	219,849	1,021,247	3,198,231	1,167,810	1,638,474	2,184,569	3,553,307	4,249,571	6
ORDINARY									
FAMINE RELIEF AND INSURANCE									
Protective Works, Railways - -	-	-	-	-	-	-	-	-	7
Ditto - Irrigation - - - - -	-	-	-	-	-	-	-	-	8
	-	-	-	-	-	-	-	-	9
TELEGRAPH									
New Works (a) - - - - -	207,000	312,000	159,000	85,000	202,000	148,915	(b) 95,020	98,085	10
RAILWAYS									
State Railways, Capital - - -	-	-	5,743	7,926	2,916	10,833	32,766	105,193	11
Less transferred to Productive	-	-	-	-	-	-	-	-	12
Frontier Railways - - - - -	-	-	-	-	-	-	-	-	13
IRRIGATION AND NAVIGATION									
New Works (c) - - - - -	280,000	300,000	260,800	250,000	220,000	371,191	187,077	272,480	14
Less transferred to Productive	-	-	-	-	-	-	-	-	15
MILITARY WORKS									
New Works (e) - - - - -	2,022,485	2,453,048	1,652,653	1,000,974	948,074	758,046	711,840	677,570	16
CIVIL BUILDINGS AND ROADS AND OTHER SERVICES									
New Works (d) - - - - -	2,000,800	2,000,000	1,800,000	1,700,000	1,700,000	1,600,000	1,900,000	1,700,000	17
*GRAND TOTAL, ORDINARY - £	4,493,285	5,064,048	3,877,399	3,053,900	3,069,990	2,786,979	2,926,708	2,853,228	18
Less,—Transferred to Productive	-	-	-	-	-	-	-	-	19
TOTAL ORDINARY AND PRO- DUCTIVE - £	4,713,134	5,065,295	3,875,637	3,221,710	3,069,990	2,786,979	2,926,708	2,853,228	20
Deduct,—Debt created or incurred on the Purchase of the East Indian and Eastern Bengal Railways, the original cost being shown under Guaranteed Railways - - -	-	-	-	-	-	-	-	-	21
TOTAL CAPITAL CHARGE - £	4,713,134	5,065,295	3,875,637	3,221,710	3,069,990	2,786,979	2,926,708	2,853,228	22

(a) A separate Capital Account was not kept before 1872-73, the Expenditure on Telegraph Works must therefore be considered as approximate, they have been taken from the Volume of Miscellaneous Statistics, Part III., compiled in the Department of Finance and Commerce, and from the Finance Accounts.

(b) Partly estimated.

Calcutta,
22 March 1884.

ABSTRACT OF PUBLIC WORKS OPERATIONS FROM YEAR 1867-68 TO DATE

CAPITAL OR BLOCK EXPENDITURE

Indian Currency converted at Rs 10 = £ 1. English Currency in £ Sterling

	1875-76	1876-77	1877-78	1878-79	1879-80	1880-81	1881-82	1882-83	TOTAL	REVISED ESTIMATE, 1883-84	BUDGET ESTIMATE, 1884-85
	£	£	£	£	£	£	£	£	£	£	£
1	3,165,184	2,865,861	3,984,968	3,327,888	2,880,493	3,402,331	1,656,675	1,692,486	31,366,174	3,069,800	3,275,500
2	-	-	-	-	9,790,862	418,435	1,041,662	628,630	11,819,389	742,000	540,000
3	3,165,184	2,865,861	3,984,968	3,327,888	12,411,355	3,820,766	2,098,237	2,290,996	43,185,563	3,811,800	3,816,500
4	1,105,446	943,423	806,084	794,654	598,837	5,406,467	1,184,888	2,324,308	20,766,856	763,100	948,800
5	-	-	-	239,356	85,000	70,000	68,906	49,836	539,070	- 539,100	-
6	4,270,029	3,800,284	4,791,052	4,881,898	13,086,192	9,297,233	3,962,081	4,665,112	64,486,489	4,031,800	4,764,400
7	-	-	-	-	-	-	614,551	-129,101	485,450	625,600	3,138,500
8	-	-	-	-	-	-	135,449	263,443	398,892	291,000	310,100
9	-	-	-	-	-	-	750,000	134,342	884,342	916,900	1,448,700
10	140,640	135,038	69,975	59,060	54,181	99,803	104,004	154,978	2,136,293	216,100	308,700
11	66,279	27,287	71,394	220,850	471,410	77,093	247,673	467,778	1,814,949	-374,500	166,700
12	-	-	-	-	-	-948,711	-21,524	-15,214	-385,449	-	-
13	-	-	-	-	1,884,350	2,332,615	234,962	259,500	4,112,147	-22,500	-78,000
14	378,587	219,839	295,953	262,447	278,512	327,916	884,246	415,722	4,567,340	(d) 350,000	(d) 300,000
15	-	-	-	-	-	-4,792,017	-619,084	-	-5,411,101	-	-
16	813,370	689,634	629,098	656,059	508,468	451,948	504,265	458,916	14,933,442	(d) 400,000	(d) 400,000
17	1,723,107	1,750,594	1,113,769	1,208,267	1,292,374	1,156,025	1,910,788	2,118,097	26,653,245	(d) 2,000,000	(d) 1,500,000
18	3,121,968	2,825,312	2,180,189	2,457,592	3,849,795	4,405,710	4,196,316	4,009,326	55,101,728	3,485,900	4,046,700
19	-	-	-	-	-	-5,640,728	-640,698	-15,214	-6,296,650	-	-
20	7,302,392	6,634,596	6,971,235	6,839,490	16,944,087	8,062,215	7,437,741	8,659,224	113,290,667	7,517,700	8,810,500
21	-	-	-	-	9,576,614	-	586,300	480,383	10,648,247	504,000	1,023,700
22	7,392,593	6,634,596	6,971,235	6,839,490	7,268,373	8,062,215	6,851,441	8,178,891	102,847,420	7,013,700	7,786,800

(c) From 1867-68 to 1880-81 are rough estimates, and from thence to 1882-83 the figures have been compiled from the Finance Accounts, but for want of details, are partly estimated.

(d) Estimated

(e) From 1867-68 to 1874-75 are rough estimates, and from thence to 1882-83 the figures have been compiled from the Finance Accounts, but for want of details, are partly estimated

W E Durant, Hon Assistant Examiner,
Public Works Department.

L Conroy Gordon, Deputy Accountant General,
Public Works Department.

[Issue V—No 2 B.]

**ABSTRACT OF PUBLIC WORKS DEPARTMENT REVENUE (OR MAINTENANCE) OPERATIONS
FROM THE YEAR 1867-68 TO DATE**

RECEIPTS.

Indian Currency converted at Rs 10 = £ 1 English Currency in £ Sterling

	1867-68.	1868-69	1869-70.	1870-71	1871-72	1872-73.	1873-74	1874-75	
PRODUCTIVE.									
STATE RAILWAYS									
State Railways—Gross Receipts - - -	£	£.	£	£	£.	£.	£	£.	1
East Indian Railway—Gross Receipts - - -	-	-	-	-	-	-	-	-	2
TOTAL STATE RAILWAYS - £.	-	13,282	8,080	7,576	3,766	16,533	39,914	130,986	3
GUARANTEED RAILWAYS									
Guaranteed Railways—Net Traffic Receipts - - -	2,247,163	2,436,731	2,943,843	2,869,328	1,581,941	1,205,444	1,589,671	1,959,659	4
East Indian Railway—Net Traffic Receipts - - -					1,606,148	1,651,933	2,023,443	2,171,905	5
TOTAL GUARANTEED RAILWAYS - £.	2,247,163	2,436,731	2,943,843	2,869,328	3,188,089	2,860,377	3,613,114	4,181,564	6
TOTAL RAILWAYS - - - £	2,247,163	2,450,013	2,951,923	2,866,904	3,191,855	2,870,910	3,653,028	4,202,550	7
IRRIGATION									
Irrigation and Navigation—Direct Receipts - - -	366,488	285,068	450,486	406,403	380,122	358,393	377,018	369,927	8
Madras Irrigation and Canal Company—Net Traffic Receipts - - -	977	1,018	1,003	74	-8,205	-6,888	-10,635	-7,084	9
Portion of Land Revenue due to Irrigation - - -	-	-	-	-	-	-	-	-	10
TOTAL IRRIGATION - - - £	367,465	286,086	451,489	406,477	371,917	351,505	366,383	362,843	11
GRAND TOTAL, PRODUCTIVE - - - £.	2,614,628	2,736,099	3,403,412	3,273,381	3,563,772	3,228,718	4,019,411	4,645,443	12
ORDINARY									
RAILWAYS									
State Railways—Gross Receipts - - -	-	-	-	-	-	-	-	-	13
Subsidized Railways - - -	-	-	-	-	-	-	-	-	14
TOTAL RAILWAYS - - - £	-	-	-	-	-	-	-	-	15
IRRIGATION									
Irrigation and Navigation - - -	88,501	127,419	151,108	140,730	98,811	124,417	165,674	146,491	16
OTHER PUBLIC WORKS									
Telegraph - - -	241,947	274,497	257,134	247,010	228,368	249,802	250,638	286,479	17
Military Works - - -	† 40,000	† 40,000	† 40,000	† 40,000	† 40,000	† 40,000	† 17,303	† 16,675	18
Civil Buildings - - -	† 684,385	† 782,003	† 642,707	† 711,205	† 496,746	† 501,205	566,839	610,523	19
TOTAL OTHER PUBLIC WORKS - £.	966,332	1,096,500	939,841	998,215	765,114	791,007	834,780	813,677	20
GRAND TOTAL, ORDINARY - - - £.	1,054,833	1,228,919	1,090,949	1,138,945	863,925	915,424	1,000,454	960,168	21
TOTAL ORDINARY AND PRODUCTIVE - - - £	3,669,461	3,965,018	4,494,361	4,412,326	4,427,697	4,144,142	5,019,865	5,605,611	22

* Only for Northern India.

† Approximately distributed.

‡ The sums credited to Military Works are the amounts brought to account by the Inspector General of Military Works. The distribution of the Revenue between Military and Civil Buildings was not made till 1876-77

Calcutta,
22 March 1884. }

**ABSTRACT OF PUBLIC WORKS DEPARTMENT REVENUE (OR MAINTENANCE) OPERATIONS
FROM THE YEAR 1867-68 TO DATE**

RECEIPTS

Indian Currency converted at Rs. 10 = £ 1 English Currency in £ Sterling

	1875-76	1876-77	1877-78	1878 79	1879-80	1880-81	1881-82	1882-83	TOTAL	REVISED ESTIMATE, 1883-84	BUDGET ESTIMATE, 1884-85
	£	£	£	£	£	£	£	£	£	£	£
1	292,835	380,668	582,077	976,828	1,548,728	2,268,905	2,356,542	2,646,327	11,473,047	3,087,300	3,716,900
2	-	-	-	-	1,177,692	4,252,841	4,710,506	4,601,288	14,742,327	5,030,200	4,850,200
3	292,835	380,668	582,077	976,828	2,726,420	6,521,746	7,267,048	7,247,615	26,215,374	8,117,500	8,567,100
4	2,452,481	2,641,762	3,627,968	2,709,998	2,476,347	2,894,633	3,615,479	3,582,046	60,156,623	3,365,000	3,613,000
5	1,807,739	2,445,879	2,965,491	2,491,308	2,146,237	18,890	146	-	60,156,623	3,365,000	3,613,000
6	4,260,210	5,087,641	6,595,459	5,201,306	4,622,684	2,913,543	3,615,625	3,582,046	60,156,623	3,365,000	3,613,000
7	4,553,045	5,468,309	7,175,536	6,178,134	7,349,004	9,435,289	10,882,673	10,829,661	86,371,997	11,482,500	12,180,100
8	429,679	425,201	502,981	613,270	708,041	639,144	865,799	930,983	8,129,003	944,500	942,600
9	17,765	3,328	8,760	8,886	15,799	7,650	8,834	5,624	58,554	-	-
10	-	-	156,369	126,934	602,398	797,319	491,220	469,081	2,843,321	542,500	508,400
11	411,914	421,972	650,000	749,090	1,326,238	1,428,813	1,348,185	1,394,440	10,715,770	1,487,800	1,451,000
12	4,964,959	5,880,281	7,826,136	6,927,224	8,675,242	10,864,102	12,230,858	12,224,101	97,087,767	12,969,800	13,631,100
13	-	-	-	-	-	-	-	138,792	138,792	174,900	196,100
14	-	-	-	-	-	-	2,290	3,680	5,970	2,700	-
15	-	-	-	-	-	-	2,290	142,472	144,762	177,600	196,100
16	163,095	177,269	166,104	168,619	193,067	197,908	131,239	189,057	2,379,509	142,600	140,700
17	309,040	341,227	358,430	426,694	505,552	539,087	469,208	545,315	5,530,428	525,100	573,500
18	116,478	39,201	39,237	39,554	38,255	36,727	50,298	44,306	1,578,084	36,700	37,700
19	505,428	512,706	714,790	531,522	464,811	510,586	549,972	504,747	1,184,175	469,800	543,200
20	830,946	893,184	1,112,457	997,770	1,008,618	1,086,400	1,063,478	1,094,368	15,292,687	1,081,130	1,154,400
21	994,041	1,070,453	1,278,561	1,166,389	1,201,685	1,284,308	1,197,007	1,375,697	17,816,958	1,351,300	1,491,200
22	5,939,000	6,960,734	9,104,697	8,093,613	9,876,927	12,148,410	13,427,865	13,599,998	114,004,725	14,321,100	15,122,300

W E Dewart, Hon. Assistant Examiner,
Public Works Department.

L Conway Gordon, Deputy Accountant General,
Public Works Department.

[Issue V—No 2 C]

ABSTRACT OF PUBLIC WORKS DEPARTMENT (REVENUE AND MAINTENANCE OPERATIONS)

REVENUE (OR MAINTENANCE) WORKING EXPENSES

Indian Currency converted at Rs 10 = £ 1. English Currency in £ Sterling

	1867-68	1868-69	1869-70	1870-71	1871-72	1872-73	1873-74	1874-75	
PRODUCTIVE									
STATE RAILWAYS									
Railways	£	£	£	£	£	£	£	£	
State Railways (Working Expenses)	-	29,987	8,869	7,509	7,829	11,171	46,388	86,004	1
Interest on Debt incurred for Productive Railways	12	11,071	25,937	38,742	60,621	101,787	177,152	284,528	2
TOTAL STATE RAILWAYS - £.	12	41,058	34,806	46,251	68,450	112,958	223,540	370,532	3
EAST INDIAN RAILWAY									
Working Expenses	-	-	-	-	-	-	-	-	4
Interest on Debt	-	-	-	-	-	-	-	-	5
Annuities in purchase of Guaranteed Railways	-	-	-	-	-	-	-	-	6
TOTAL EAST INDIAN RAILWAY - £	-	-	-	-	-	-	-	-	7
GUARANTEED RAILWAYS									
Guaranteed Railways, Interest and Excess Profits	} 3,692,631	4,156,350	4,291,945	4,489,609	3,739,398	8,269,467	3,269,275	3,214,302	8
East Indian Railway					1,524,580	1,578,286	1,584,961	1,877,024	9
TOTAL GUARANTEED RAILWAYS - £.	3,692,631	4,156,350	4,291,945	4,489,609	4,662,973	4,847,753	4,854,236	5,091,326	10
TOTAL RAILWAYS - - - £.	3,692,643	4,197,378	4,326,751	4,535,860	4,731,423	4,960,711	5,077,776	5,461,758	11
IRRIGATION									
Irrigation and Navigation Working Expenses	185,039	167,060	199,170	212,511	234,990	255,124	265,988	289,879	12
Madras Irrigation and Canal Company	52,977	54,150	53,989	53,232	51,202	50,947	50,699	50,512	13
Interest on Debt incurred for Productive Irrigation Works	4,885	18,147	67,871	122,187	156,233	191,329	230,721	279,402	14
TOTAL IRRIGATION - - - £	242,401	239,357	320,830	387,930	442,425	497,400	547,388	619,793	15
OTHER PUBLIC WORKS									
Miscellaneous Public Improvement, Interest on Debt incurred for Madras Harbour Works	-	-	-	-	-	-	-	-	16
GRAND TOTAL, PRODUCTIVE £	3,935,044	4,436,735	4,647,581	4,923,790	5,173,848	5,458,111	5,625,134	6,081,551	17
ORDINARY.									
Telegraph Repairs (a)	307,801	373,095	394,401	406,063	248,602	334,634	316,817	334,024	18
RAILWAYS									
State Railways, Revenue	-	-	-	-	-	-	-	-	19
Subsidized Railways	-	-	-	-	-	-	-	-	20
Southern Mahratta	-	-	-	-	-	-	-	-	21
IRRIGATION									
Irrigation and Navigation—Repairs (including (b) Expenditure by Civil Department)	276,067	298,093	268,917	264,679	228,415	380,558	408,219	390,563	22
OTHER PUBLIC WORKS									
Military Works—Repairs (c)	232,939	249,398	203,705	255,166	292,629	410,518	411,120	508,358	23
Civil Buildings—Repairs (including Civil Department outlay) (d)	1,840,322	2,042,690	1,897,528	1,546,196	1,443,437	1,746,875	1,970,310	1,797,766	24
GRAND TOTAL, ORDINARY - £.	2,657,129	2,963,116	2,764,551	2,472,104	2,213,083	2,872,585	3,106,466	3,030,699	25
TOTAL ORDINARY AND PRODUCTIVE - £	6,592,173	7,399,851	7,412,132	7,395,894	7,386,931	8,330,696	8,731,600	9,112,250	26
Less Receipts	3,669,461	3,960,018	4,494,361	4,412,326	4,427,697	4,144,142	5,019,865	5,605,611	27
Net Charge - - - - - £	2,922,712	3,439,833	2,917,771	2,983,568	2,959,234	4,186,554	3,711,735	3,506,639	28

(a) See Note in Block Account.

(b) From 1867-68 to 1871-72 are rough estimates. From 1872-73 the figures are taken from the Finance Accounts, but for want of details, are partly estimated.

Calcutta,
22 March 1884 }

ABSTRACT OF PUBLIC WORKS DEPARTMENT (REVENUE AND MAINTENANCE OPERATIONS).

REVENUE (OR MAINTENANCE) WORKING EXPENSES
 Indian Currency converted at Rs 10 = £ 1 English Currency in £. Sterling

	1875-76	1876-77	1877-78	1878-79	1879-80	1880-81	1881-82	1882-83	TOTAL	REVISED ESTIMATE, 1883-84	BUDGET ESTIMATE, 1884-85
	£	£	£	£	£	£	£	£	£	£.	£.
1	105,414	287,989	426,005	740,373	1,215,231	1,007,528	1,686,392	1,634,176	7,890,835	1,691,000	2,032,700
2	408,116	528,737	665,754	913,512	1,048,700	1,204,660	1,160,445	1,226,702	7,856,476	1,321,000	1,459,200
3	603,530	816,726	1,091,759	1,653,885	2,263,931	2,812,188	2,846,837	2,760,878	15,747,311	3,012,000	3,491,900
4	-	-	-	-	228,538	1,605,362	1,646,959	2,009,398	5,550,257	2,045,500	2,052,500
5	-	-	-	-	34,397	397,244	434,242	486,683	1,352,546	502,800	531,100
6	-	-	-	-	-	993,298	1,239,446	1,216,745	3,449,479	1,203,300	1,255,100
7	-	-	-	-	262,995	2,995,904	3,320,847	3,772,796	10,352,282	3,751,600	3,838,700
8	3,325,542	3,295,362	3,441,428	3,525,966	3,393,691	3,411,753	3,678,704	3,876,644	73,715,059	3,931,370	3,770,260
9	1,605,974	1,686,311	2,013,252	2,074,639	2,036,872	266,058	1,098	-			
10	4,929,516	4,981,873	5,454,680	5,000,604	5,427,563	3,677,809	3,679,847	3,876,644			
11	5,533,046	5,798,309	6,346,439	7,234,489	7,954,429	9,485,901	9,947,331	10,410,318	99,814,652	10,694,970	11,100,860
12	350,758	363,356	370,847	381,550	414,601	425,473	455,635	501,936	5,073,867	519,000	562,100
13	50,504	50,483	50,335	50,568	50,455	50,538	50,496	34,578	796,065	-	-
14	326,218	367,196	402,186	488,476	519,830	762,770	726,386	784,188	5,447,325	845,700	879,800
15	727,480	781,035	823,368	920,594	984,886	1,238,781	1,232,517	1,311,102	11,317,257	1,364,700	1,441,900
16	-	-	-	5,836	13,584	17,071	17,952	20,327	74,770	-74,800	-
17	6,260,526	6,579,434	7,369,807	8,180,919	8,952,890	10,741,753	11,097,800	11,741,747	111,206,679	11,984,870	12,542,760
18	352,520	338,089	410,920	465,982	396,962	398,031	431,537	470,306	5,979,754	495,700	518,500
19	-	-	-	-	-	-	-	150,122	150,192	170,500	176,700
20	-	-	-	-	-	-	17,527	39,663	57,190	100,300	88,400
21	-	-	-	-	-	-	-	32,950	32,950	86,000	89,500
22	397,228	401,323	461,806	378,472	390,395	381,787	405,687	485,393	5,817,532	(c) 447,300	(c) 402,400
23	524,368	512,688	524,831	534,469	457,829	517,220	566,281	505,391	6,706,908	(c) 636,500	(c) 523,000
24	1,622,050	1,688,004	1,970,120	1,860,937	1,727,328	2,192,529	2,132,382	2,232,217	29,611,191	(c) 3,047,800	(c) 2,480,300
25	2,896,766	2,840,104	3,367,677	3,839,830	2,972,514	3,489,567	3,553,414	3,916,042	48,355,647	4,984,500	4,278,800
26	9,157,292	9,419,538	10,737,484	11,420,749	11,925,413	14,231,320	14,651,214	16,657,789	159,562,326	16,969,370	16,821,560
27	3,959,000	6,960,734	9,104,697	8,093,613	9,876,927	12,148,410	13,427,985	13,999,998	114,904,725	14,321,100	15,122,300
28	3,198,294	2,458,804	1,632,787	3,327,136	2,048,486	2,082,910	1,223,349	2,057,791	44,657,601	2,648,270	1,699,260

(c) Estimated
 (d) To 1874-75 are rough estimates. From 1876-76 to 1882-83 the figures are taken from the Finance Accounts, but for want of details are partly estimated

W E Durrant, Hon Assistant Examiner,
 Public Works Department.

L Conway-Gordon, Deputy Accountant General,
 Public Works Department.

[Issue V.—No 3 A.]

ABSTRACT STATEMENT OF RAILWAY TRANSACTIONS FROM YEAR 1867-68 TO DATE.

TOTAL EXPENDITURE

Indian Currency converted at Rs 10 = £ 1 English Currency in £. Sterling

	1867-68	1868-69	1869-70	1870-71	1871-72	1872-73	1873-74	1874-75	
F—FAMINE RELIEF AND INSURANCE	£.	£	£	£	£	£	£	£.	
33 Protective Works, Railways - -	-	-	-	-	-	-	-	-	1
G—EXPENDITURE ON PRODUCTIVE PUBLIC WORKS, REVENUE ACCOUNT:									
36 State Railways (Working Expenses)	-	29,957	8,869	7,509	7,829	11,171	46,388	86,004	2
39 „ Interest on Debt -	12	11,071	25,937	38,742	60,621	101,787	177,152	284,528	3
East Indian Railway (Working Expenses, Interest, &c.) - -	-	-	-	-	-	-	-	-	4
37 Guaranteed Railways (Interest, and Excess Profits) - -	-	-	-	-	3,138,393	3,269,467	3,269,275	3,214,202	5
East Indian Railway (Interest, and Excess Profits) - -	3,692,631	4,156,350	4,291,915	4,489,609	1,524,580	1,578,286	1,584,961	1,877,024	6
39 Annuities in Purchase of Guaranteed Railways, &c - -	-	-	-	-	-	-	-	-	7
TOTAL - £	3,692,643	4,197,378	4,326,751	4,535,860	4,731,423	4,960,711	5,077,776	5,461,758	8
H—EXPENDITURE ON PUBLIC WORKS NOT CLASSED AS PRODUCTIVE									
40 State Railways, Capital - -	-	-	5,743	7,926	2,816	10,833	32,766	105,193	9
41 „ Revenue - - - -	-	-	-	-	-	-	-	-	10
42 Subsidized Railways - - -	-	-	-	-	-	-	-	-	11
Southern Mahratta Railway -	-	-	-	-	-	-	-	-	12
43 Frontier Railways - - - -	-	-	-	-	-	-	-	-	13
TOTAL - - £	-	-	5,743	7,926	2,816	10,833	32,766	105,193	14
N—EXPENDITURE ON PRODUCTIVE PUBLIC WORKS—CAPITAL ACCOUNT									
50 State Railways									
During the Year - - -	594	552,398	190,870	449,372	644,620	1,413,649	2,354,625	3,014,180	15
Amount transferred - - -	-	-	-	-	-	-	-	-	16
East Indian Railway - - -	-	-	-	-	-	-	-	-	17
TOTAL - - £	594	552,398	190,870	449,372	644,620	1,413,649	2,354,625	3,014,180	18
TOTAL - - £.	3,693,237	4,749,776	4,523,364	4,994,158	5,378,859	6,385,193	7,465,167	8,581,131	19
Deduct,—									
Revenue realized as per Abstract Statement - - - -	2,247,163	2,450,013	2,951,923	2,866,904	3,191,855	2,876,910	3,653,028	4,262,550	20
Deduct,—	1,446,074	2,299,763	1,571,441	2,126,254	2,187,004	3,508,283	3,812,139	4,318,581	21
Debit created or incurred in the purchase of the East Indian and Eastern Bengal Railways to be cancelled by Annuity and Sinking Fund payments - - -	-	-	-	-	-	-	-	-	22
NET NORMAL OUTLAY BY THE STATE - £.	1,446,074	2,299,763	1,571,441	2,126,254	2,187,004	3,508,283	3,812,139	4,318,581	23

Calcutta,
22 March 1884 }

ABSTRACT STATEMENT OF RAILWAY TRANSACTIONS FROM YEAR 1867-68 TO DATE.

TOTAL EXPENDITURE

Indian Currency converted at Rs 10 = £ 1 English Currency in £ Sterling

	1875-76	1876-77	1877-78	1878-79	1879-80	1880-81	1881-82	1882-83	TOTAL	REVISED ESTIMATE, 1883-84	BUDGET ESTIMATE, 1884-85
	£	£	£	£	£	£	£	£	£	£	£
1	-	-	-	-	-	-	614,551	-129,101	485,450	625,900	1,138,600
2	195,414	287,989	426,005	740,373	1,215,281	1,607,628	1,686,392	1,534,176	7,890,838	1,691,000	2,032,700
3	408,116	528,737	665,754	913,512	1,048,700	1,204,660	1,160,445	1,226,702	7,856,476	1,321,000	1,459,200
4	-	-	-	-	262,935	2,002,606	2,081,201	2,556,061	6,802,803	2,548,300	2,583,600
5	3,325,542	3,295,362	3,441,428	3,525,965	3,393,691	3,411,753	3,676,754	3,876,644	73,715,059	3,931,370	3,770,260
6	1,603,974	1,686,311	2,013,252	2,074,639	2,033,872	266,056	1,093	-			
7	-	-	-	-	-	993,298	1,239,446	1,216,735	3,449,479	1,203,360	1,255,100
8	5,533,046	5,798,399	6,546,439	7,254,489	7,954,429	9,485,901	9,847,331	10,410,318	99,814,652	10,694,970	11,100,860
9	66,279	27,287	71,394	220,850	471,410	77,003	247,673	467,776	1,814,949	-374,600	166,700
10	-	-	-	-	-	-	-	150,122	150,122	170,900	176,700
11	-	-	-	-	-	-	-	17,527	39,663	57,190	88,400
12	-	-	-	-	-	-	-	32,950	32,950	86,000	89,500
13	-	-	-	-	1,334,350	2,293,615	224,682	259,500	4,112,147	-72,500	-73,000
14	66,279	27,287	71,394	220,850	1,805,760	2,370,618	489,882	950,011	6,167,358	-39,900	448,300
15	3,165,184	2,865,861	3,984,968	3,327,888	2,680,493	2,553,620	1,635,151	1,647,252	30,480,725	3,069,800	3,273,600
16	-	-	-	-	-	846,711	21,524	15,214	885,449	-	-
17	-	-	-	-	9,730,862	418,435	1,041,562	628,530	11,819,389	742,000	540,000
18	3,165,184	2,865,861	3,984,968	3,327,888	12,411,355	3,820,766	2,698,237	2,290,996	43,185,563	3,811,800	3,815,600
19	8,764,509	8,091,547	10,602,801	10,803,227	22,171,544	15,677,285	13,650,001	13,522,224	149,653,023	15,092,770	16,503,360
20	4,513,043	5,468,309	7,175,536	6,178,134	7,349,004	10,284,000	10,906,487	10,987,347	87,402,208	11,660,100	12,376,200
21	4,211,464	3,223,238	3,427,265	4,625,093	14,822,540	5,393,285	2,743,514	2,534,877	62,250,815	3,432,670	4,127,160
22	-	-	-	-	9,576,614	-	586,300	480,333	10,643,247	504,000	1,023,700
23	4,211,464	3,223,238	3,427,265	4,625,093	5,245,926	5,393,285	2,157,214	2,054,544	51,607,568	2,928,670	3,103,460

W. E. Durant, Hon Assistant Examiner,
Public Works Department

L. Conroy Gordon, Deputy Accountant General,
Public Works Department.

[Issue V.—No. 3 C (b)]

ABSTRACT STATEMENT OF RAILWAY TRANSACTIONS FROM 1867-68 TO DATE.

REVENUE

Indian Currency converted at Rs 10 = £ 1 English Currency in £ Sterling

	1867-68	1868-69	1869-70	1870-71	1871-72	1872-73	1873-74	1874-75
G—REVENUE FROM PRO- DUCTIVE PUBLIC WORKS								
XXV—State Railways (Gross Receipts) - - -	₹	₹	₹	₹	₹	₹	₹	₹
East Indian Railway (Gross Receipts) - - -	-	13,282	8,080	7,576	8,706	16,538	80,914	130,986
XXVI—Guaranteed Railways. (Net Traffic Receipts) - - -					1,581,941	1,205,444	1,589,671	1,959,659
East Indian Railway (Net Traffic Receipts) - - -	2,247,163	2,436,731	2,948,843	2,859,328	1,606,148	1,654,933	2,023,443	2,171,905
TOTAL - - - £	2,247,163	2,450,013	2,951,923	2,866,904	3,191,855	2,876,910	3,653,028	4,262,550
H—RECEIPTS FROM PUBLIC WORKS NOT CLASSED AS PRODUCTIVE								
XXIX—State Railways - - -	-	-	-	-	-	-	-	-
XXX—Subsidised Railways - - -	-	-	-	-	-	-	-	-
TOTAL - - - £	-	-	-	-	-	-	-	-
TOTAL REVENUE - - £	2,247,163	2,450,013	2,951,923	2,866,904	3,191,855	2,876,910	3,653,028	4,262,550
Productive Public Works Expenditure formerly treated as Ordinary transferred to Capital by credit as an Extraordinary Receipt - - -	-	-	-	-	-	-	-	-
GRAND TOTAL - - - £	2,247,163	2,450,013	2,951,923	2,866,904	3,191,855	2,876,910	3,653,028	4,262,550

Calcutta, }
23 March 1884. }

ABSTRACT STATEMENT OF RAILWAY TRANSACTIONS FROM 1867-68 TO DATE

REVENUE.

Indian Currency converted at Rs 10 = £ 1 English Currency in £. Sterling

1875-76	1876-77	1877-78	1878-79	1879-80	1880-81	1881-82	1882-83	TOTAL	REVISED ESTIMATE, 1883-84.	BUDGET ESTIMATE, 1884-85.
£	£	£	£	£	£	£	£	£	£	£
292,835	380,668	582,077	976,828	1,548,728	2,268,905	2,556,542	2,646,327	11,473,047	3,087,300	3,716,900
-	-	-	-	1,177,692	4,252,341	4,710,506	4,601,288	14,742,327	5,030,200	4,850,200
2,452,481	2,641,762	3,627,968	2,709,998	2,476,347	2,894,553	3,615,479	3,582,046	60,156,628	3,365,000	3,613,000
1,807,729	2,445,879	2,965,491	2,491,308	2,146,237	18,890	146	-			
4,553,045	5,468,809	7,175,536	6,178,134	7,349,004	9,435,289	10,882,673	10,829,661	86,371,997	11,482,500	12,180,100
-	-	-	-	-	-	-	138,792	138,792	174,900	196,100
-	-	-	-	-	-	2,290	3,680	5,970	2,700	-
-	-	-	-	-	-	2,290	142,472	144,762	177,600	196,100
4,553,045	5,468,809	7,175,536	6,178,134	7,349,004	9,435,289	10,884,963	10,972,133	86,516,759	11,660,100	12,376,200
-	-	-	-	-	848,711	21,524	15,214	885,449	-	-
4,003,045	5,468,809	7,175,536	6,178,134	7,349,004	10,284,000	10,906,487	10,987,347	87,402,208	11,660,100	12,376,200

W E Dewart, Hon Assistant Examiner,
Public Works Department

L Conway-Gordon, Deputy Accountant General,
Public Works Department.

[Issue V—No 3 B]

ABSTRACT ACCOUNT OF RAILWAY TRANSACTIONS FROM COMMENCEMENT TO DATE

CAPITAL OR BLOCK EXPENDITURE.

Indian Currency converted at Rs 10 = £ 1 English Currency in £ Sterling

WORKS of which the Capital is shown in Accounts of the Empire.	To end of 1866-67	1867-68	1868-69	1869-70	1870-71	1871-72.	1872-73	1873-74	1874-75
PRODUCTIVE									
STATE RAILWAYS	£	£	£.	£	£	£.	£	£.	£
State Railways - - -	-	594	552,398	190,870	449,372	644,620	1,413,649	2,354,625	3,014,180
„ Amount transferred - - -	-	-	-	-	-	-	-	-	-
East Indian Railway - - -	-	-	-	-	-	-	-	-	-
TOTAL PRODUCTIVE STATE RAILWAYS } £	-	594	552,398	190,870	449,372	644,620	1,413,649	2,354,625	3,014,180
ORDINARY									
FAMINE RELIEF and INSURANCE									
Protective Works, Railways - - - - -	-	-	-	-	-	-	-	-	-
RAILWAYS									
State Railways (Capital) - - -	-	-	-	5,743	7,926	2,816	10,833	32,760	105,193
„ Less Amount transferred to Productive - - -	-	-	-	-	-	-	-	-	-
Frontier Railways - - -	-	-	-	-	-	-	-	-	-
TOTAL ORDINARY STATE RAILWAYS } £	-	-	-	5,743	7,926	2,816	10,833	32,766	105,193
TOTAL OUTLAY BY THE STATE - - - } £	-	594	552,398	196,613	457,298	647,436	1,424,482	2,387,391	3,119,373
Guaranteed Railways, Capital withdrawals - - -	(6)68,179,728	7,120,675	3,867,927	4,742,851	3,776,270	2,498,728	477,245	693,053	1,087,911
Subsidized Railways, Capital withdrawals - - -	-	-	-	-	-	-	-	-	-
Limited Guaranteed Railways - - -	-	-	-	-	-	-	-	-	-
Capital representing the amount of Deferred Annuity payable to Shareholders of the East Indian Railway - - -	-	-	-	-	-	-	-	-	-
TOTAL - - - £	68,179,728	7,120,675	4,420,325	4,939,464	4,233,568	3,144,164	1,901,727	3,080,444	4,207,284
<i>Deduct:-</i>									
Debt created or incurred in the purchase of the East Indian and Eastern Bengal Railways, the original cost being shown under Guaranteed Railways - - -	-	-	-	-	-	-	-	-	-
TOTAL CAPITAL CHARGE } £	68,179,728	7,120,675	4,420,325	4,939,464	4,233,568	3,144,164	1,901,727	3,080,444	4,207,284

(a) This sum includes 1,023,700 l for Debenture Stock of the Eastern Bengal Railway

Calcutta,
22 March 1884 }

ABSTRACT ACCOUNT OF RAILWAY TRANSACTIONS FROM COMMENCEMENT TO DATE

CAPITAL OR BLOCK EXPENDITURE.

Indian Currency converted at Rs 10 = £ 1 English Currency in £. Sterling

1875-76	1876-77	1877-78	1878-79	1879-80	1880-81	1881-82	1882-83	TOTAL	REVISED ESTIMATE, 1883-84	BUDGET ESTIMATE, 1884-85		
£	£	£	£	£	£	£	£	£	£	£		
3,165,184	2,865,861	3,984,968	3,327,888	2,680,493	2,553,620	1,635,151	1,647,252	30,480,725	} 3,069,800	(a) 3,275,600		
-	-	-	-	-	848,711	21,524	15,214	885,449			} 742,000	540,000
-	-	-	-	9,730,862	418,435	1,041,562	628,530	11,819,389				
3,165,184	2,865,861	3,984,968	3,327,888	12,411,355	3,820,766	2,698,237	2,290,996	43,185,563	3,811,800	3,815,600		
-	-	-	-	-	-	614,551	-129,101	485,450	625,900	1,138,600		
66,279	27,287	71,394	220,850	471,410	77,003	247,673	467,776	1,814,949	} -374,600	166,700		
-	-	-	-	-	-848,711	-21,524	-15,214	-885,449			} -22,500	-73,000
-	-	-	-	1,334,350	2,293,615	224,682	259,500	4,112,147				
66,279	27,287	71,394	220,850	1,805,760	1,521,907	1,065,382	582,961	5,527,097	228,800	1,232,300		
3,231,463	2,893,148	4,066,362	3,548,738	14,217,115	5,342,673	3,763,619	2,873,957	48,712,660	4,040,600	5,047,900		
950,806	715,459	1,323,984	1,012,623	349,560	434,790	672,435	410,873	98,312,324	1,064,600	1,382,600		
-	-	-	-	-	-	170,000	338,270	508,270	373,000	270,000		
-	-	-	-	-	-	-	710,968	710,968	610,900	785,400		
-	-	-	-	6,550,000	-	-	-	6,550,000	-	-		
4,182,269	3,698,607	5,380,346	4,561,361	21,116,675	5,777,463	4,606,054	4,334,068	154,794,222	4,089,100	7,485,900		
-	-	-	-	9,576,614	-	586,300	480,333	10,643,247	504,000	1,023,700		
4,182,269	3,698,607	5,380,346	4,561,361	11,540,061	5,777,463	4,019,754	3,853,735	144,150,975	5,585,100	6,462,200		

(b) Taken from Mr Juland Danvers' Report.

W. E. Dumas, Hon Assistant Examiner,
Public Works Department

L. Conroy-Gordon Deputy Accountant General,
Public Works Department

[Issue V—No 3 D]

ABSTRACT ACCOUNT OF RAILWAY TRANSACTIONS FROM 1867-68 TO DATE.

REVENUE (OR MAINTENANCE) WORKING EXPENSES

Indian Currency converted at Rs 10 = £ 1 English Currency in £ Sterling

	1867-68	1868-69	1869-70	1870-71	1871-72	1872-73	1873-74	1874-75
PRODUCTIVE								
STATE RAILWAYS								
RAILWAYS	£.	£.	£.	£	£	£.	£	£
State Railway, Working Expenses - - - - -	-	22,967	8,869	7,609	7,829	11,171	46,388	86,004
Interest on Debt incurred for Productive Railways - -	12	11,071	25,937	38,742	60,621	101,787	177,152	284,628
TOTAL STATE RAILWAYS } £	12	41,028	34,806	46,251	68,450	112,958	223,540	370,532
EAST INDIAN RAILWAY								
Working Expenses - - - - -	-	-	-	-	-	-	-	-
Interest on Debt - - - - -	-	-	-	-	-	-	-	-
Annuities in Purchase of Guaranteed Railways - - - - -	-	-	-	-	-	-	-	-
TOTAL EAST INDIAN RAILWAY } £	-	-	-	-	-	-	-	-
GUARANTEED RAILWAYS								
Guaranteed Railways, Interest and Excess Profits - - - - -	} 3,692,631	4,156,350	4,291,945	4,489,609	4,662,973	4,847,753	3,269,275	3,214,202
East Indian Railway - - - - -							1,584,981	1,877,024
TOTAL GUARANTEED RAILWAYS } £	3,692,631	4,156,350	4,291,945	4,489,609	4,662,973	4,847,753	4,854,236	5,091,226
TOTAL PRODUCTIVE - -	3,692,643	4,197,378	4,326,751	4,535,860	4,731,423	4,960,711	5,077,776	5,461,758
ORDINARY.								
RAILWAYS								
State Railways, Revenue - -	-	-	-	-	-	-	-	-
Subsidized Railways - - -	-	-	-	-	-	-	-	-
Southern Mahratta - - -	-	-	-	-	-	-	-	-
TOTAL ORDINARY - - £.	-	-	-	-	-	-	-	-
TOTAL ORDINARY AND PRODUCTIVE } £	3,692,643	4,197,378	4,326,751	4,535,860	4,731,423	4,960,711	5,077,776	5,461,758

Calcutta,
22 March 1884. }

ABSTRACT ACCOUNT OF RAILWAY TRANSACTIONS FROM 1867-68 TO DATE.

REVENUE (OR MAINTENANCE) WORKING EXPENSES

Indian Currency converted at Rs 10 = £ 1. English Currency in £. Sterling.

	1875-76	1876-77	1877-78	1878-79	1879-80	1880-81	1881-82	1882-83	TOTAL	REVISED ESTIMATE, 1883-84.	BUDGET ESTIMATE, 1884-85
	£	£	£	£	£	£	£	£	£	£	£
1	195,414	287,989	426,005	740,373	1,215,231	1,607,528	1,688,392	1,534,176	7,890,835	1,691,000	2,032,700
2	408,116	528,737	665,754	913,512	1,048,700	1,204,660	1,160,445	1,226,702	7,866,476	1,321,000	1,459,200
3	603,530	816,726	1,091,759	1,653,865	2,263,931	2,812,188	2,846,837	2,760,878	15,747,311	3,012,000	3,491,900
4	-	-	-	-	228,538	1,605,362	1,646,959	2,069,398	5,550,267	2,045,500	2,052,500
5	-	-	-	-	34,397	397,244	434,242	486,663	1,362,546	502,800	551,100
6	-	-	-	-	-	993,298	1,239,446	1,216,735	3,449,479	1,203,300	1,255,100
7	-	-	-	-	262,935	2,995,904	3,320,647	3,772,796	10,352,282	3,751,500	3,838,700
8	3,326,542	3,295,362	3,441,428	3,525,965	3,393,691	3,411,753	3,678,754	3,876,644	73,715,059	3,931,370	3,770,260
9	1,603,974	1,886,311	2,013,252	2,074,639	2,033,872	266,056	1,093	-			
10	4,929,516	4,981,673	5,454,680	5,600,604	5,427,563	3,677,309	3,679,847	3,876,644			
11	5,533,046	5,798,399	6,546,439	7,254,489	7,954,429	9,485,901	9,847,331	10,410,318	99,814,652	10,694,970	11,100,860
12	-	-	-	-	-	-	-	150,122	150,122	170,900	176,700
13	-	-	-	-	-	-	17,527	39,663	57,190	100,300	88,400
14	-	-	-	-	-	-	-	82,950	32,950	86,000	89,500
15	-	-	-	-	-	-	17,527	222,735	240,262	357,200	354,600
16	5,333,048	5,798,399	6,546,439	7,254,489	7,954,429	9,485,901	9,864,858	10,633,063	100,054,914	11,052,170	11,455,460

W E Dunsford, Hon Assistant Examiner,
Public Works Department.L. Conway Gordon, Deputy Accountant General,
Public Works Department.

[Issue V.—No. 3 C. (a)]

ABSTRACT ACCOUNT OF RAILWAY TRANSACTIONS FROM 1867-68 TO DATE

REVENUE (OR MAINTENANCE)—RECEIPTS.

Indian Currency converted at Rs 10 = £ 1 English Currency in £ Sterling

	1867-68	1868-69	1869-70	1870-71	1871-72	1872-73	1873-74	1874-75	
PRODUCTIVE									
STATE RAILWAYS	£	£	£	£	£	£	£	£	
State Railways — Gross Receipts	-	13,282	8,080	7,576	3,768	16,533	89,014	130,986	1
East Indian Railway — Gross Receipts	-	-	-	-	-	-	-	-	2
TOTAL STATE RAILWAYS } £	-	13,282	8,080	7,576	3,768	16,533	89,014	130,986	3
GUARANTEED RAILWAYS									
Guaranteed Railways — Net Traffic Receipts	2,247,163	2,436,731	2,043,843	2,859,328	3,188,089	2,860,377	1,580,671	1,959,059	4
East Indian Railway	-	-	-	-	-	-	2,023,443	2,171,905	5
TOTAL GUARANTEED RAILWAYS } £	2,247,163	2,436,731	2,043,843	2,859,328	3,188,089	2,860,377	3,613,114	4,131,564	6
TOTAL RAILWAYS - £	2,247,163	2,450,013	2,951,923	2,866,904	3,191,855	2,876,910	3,653,028	4,262,550	7
ORDINARY RAILWAYS									
State Railways	-	-	-	-	-	-	-	-	8
Subsidized Railways	-	-	-	-	-	-	-	-	9
TOTAL RAILWAYS - £	-	-	-	-	-	-	-	-	10
TOTAL ORDINARY AND PRODUCTIVE } £	2,247,163	2,450,013	2,951,923	2,866,904	3,191,855	2,876,910	3,653,028	4,262,550	11
Deduct,—Working Expenses	3,692,043	4,197,378	4,328,751	4,535,860	4,731,423	4,860,711	5,077,776	5,481,758	12
Net Loss or Gain — or +	-1,445,480	-1,747,365	-1,374,828	-1,668,956	-1,539,568	-2,083,801	-1,424,748	-1,190,208	13

Calcutta, }
22 March 1884 }

ABSTRACT ACCOUNT OF RAILWAY TRANSACTIONS FROM 1867-68 TO DATE.

REVENUE (OR MAINTENANCE)—RECEIPTS.

Indian Currency converted at Rs 10 = £ 1 English Currency in £ Sterling

	1875-76	1876-77	1877-78	1878-79	1879-80	1880-81	1881-82	1882-83	TOTAL	REVISED ESTIMATE, 1883-84	BUDGET ESTIMATE, 1884-85
	£.	£	£	£	£	£.	£	£	£.	£	£
1	292,835	380,668	582,077	976,828	1,548,728	2,268,905	2,556,542	2,646,327	11,473,047	3,087,300	3,716,000
2	-	-	-	-	1,177,092	4,252,841	4,710,506	4,601,288	14,742,327	5,030,200	4,850,200
3	292,835	380,668	582,077	976,828	2,726,420	6,521,746	7,267,048	7,247,615	26,215,374	8,117,500	8,567,100
4	2,452,481	2,641,762	3,627,968	2,709,098	2,476,347	2,894,653	3,615,479	3,582,046	60,156,623	3,365,000	3,613,000
5	1,807,729	2,445,879	2,965,491	2,491,308	2,146,237	18,890	146	-			
6	4,260,210	5,087,641	6,593,459	5,201,306	4,622,584	2,913,543	3,616,925	3,582,046			
7	4,553,045	5,468,909	7,175,536	6,178,134	7,349,004	9,435,289	10,882,673	10,829,681	86,371,997	11,482,500	12,180,100
8	-	-	-	-	-	-	-	138,792	138,792	174,900	166,100
9	-	-	-	-	-	-	2,200	3,680	5,970	2,700	-
10	-	-	-	-	-	-	2,200	142,472	144,762	177,600	166,100
11	4,553,045	5,468,909	7,175,536	6,178,134	7,349,004	9,435,289	10,884,963	10,972,183	86,516,759	11,660,100	12,376,200
12	5,538,046	5,796,389	6,546,439	7,264,489	7,954,429	9,485,801	9,804,856	10,683,053	100,054,914	11,052,170	11,455,460
13	-930,001	-330,000	+620,097	-1,076,355	-805,425	-50,612	+1,020,105	+330,080	-13,538,155	+607,930	+920,740

W. E. Durant, Hon Assistant Examiner,
Public Works Department.

L. Conway-Gordon, Deputy Accountant General,
Public Works Department.

[Issue V—Nos 4, 7]

STATEMENT SHOWING THE DIRECT ANNUAL GAIN OR LOSS TO THE STATE FROM RAILWAY OUTLAY SINCE 1858

Y E A R.	GUARANTEED RAILWAYS					STATE RAILWAYS.				EAST INDIAN RAILWAY				TOTAL LOSS to State	TOTAL GAIN to State
	Capital raised to end of each Year	Capital withdrawn for Expenditure to end of each Year	Net Traffic Receipts, less Moleities of Surplus Profits paid to Companies	Guaranteed Interest.	Loss or Gain to State.	Capital Expended to end of each Year	Net Traffic Receipts.	Interest including Interest on Debenture Stock and Annuity of the Eastern Bengal Railway	Loss or Gain to State.	Capital Expended	Net Traffic Receipts, less Surplus paid to Shareholders	Interest and Annuity	Gain to State.		
1858-59	£ 29,208,405	£ 19,171,531	£ 231,265	£ 936,411	£ 506,046	-	-	-	-	-	-	-	-	£ 806,046	-
1859-60	28,873,397	26,322,905	403,607	1,189,929	1,096,732	-	-	-	-	-	-	-	-	756,272	-
1860-61	24,39,917	83,901, 10	389 113	1,486,746	1,096,852	-	-	-	-	-	-	-	-	1,096,852	-
1861-62	42,979,539	40 5 3,022	891 162	1,788,158	1,306,981	-	-	-	-	-	-	-	-	1,396,901	-
1862-63	48,219,641	46,367,266	826 615	2,168,758	1,841,140	-	-	-	-	-	-	-	-	1,641,140	-
1863-64	34,329,904	51,123,919	921,648	2,456,169	1,634,654	-	-	-	-	-	-	-	-	1,834,684	-
1864-65	67,541,317	58,745,169	1,129,681	3,083,797	1,658,984	-	-	-	-	-	-	-	-	1,652,988	-
1865-66	60,860,247	60,882,025	2,865,674	2,869,241	2,887	-	-	-	-	-	-	-	-	25,667	-
1866-67	67,328,917	68,179,728	2,347,085	3,031,087	654,002	-	-	-	-	-	-	-	-	654,002	-
1867-68	76,671,761	75,299,609	1,869,112	3,480,677	1,491,566	-	-	14	-	-	-	-	-	1,491,579	-
1868-69	82,417,8 5	79,167,735	2,329,809	3,861,018	1,851,504	882,982	-	14	13,884	-	-	-	-	1,653,378	-
1869-70	86,178,336	83,919,867	2,817,941	4,126,026	1,426,084	754,562	-	-	29,370	-	-	-	-	1,526,064	-
1870-71	91,428,816	87,686,857	3,586,707	4,361,608	1,784,902	-	-	-	-	-	-	-	-	1,824,419	-
1871-72	95,566,303	90,185,585	2,677,163	4,842,168	1,665,050	1,887,864	-	-	68	43,676	-	-	-	1,37,022	-
1872-73	98,736,915	90,660,830	2,664,465	4,806,418	2,063,983	3,261,608	-	-	114,510	109,148	-	-	-	2,163,621	-
1873-74	94,726,814	91,353,683	3,241,189	4,617,923	1,376,734	6,606,124	-	-	-	199,297	-	-	-	1,382,605	-
1874-75	95,119,116	92,441,734	3,484,848	4,643,901	1,187,003	6,620,308	-	-	44,962	3,00,092	-	-	-	1,494,166	-
1875-76	98,072,441	93,395,600	3,299,024	4,637,921	308,867	11,65,423	-	-	95,997	489,181	-	-	-	1,371,661	-
1876-77	94,833,139	94,168,058	4,423,161	4,688,681	223,530	14,481,358	-	-	88,621	687,526	-	-	-	734,184	-
1877-78	96,318,173	95,420,309	6,496,790	4,635,284	+741,505	19,626,321	-	-	127,774	737,479	-	-	-	-	+131,800
1878-79	97,174,046	98,444,6 6	4,029,369	4,708,191	651,002	21,064,209	-	-	221,629	890,874	-	-	-	1,349,547	-
1879-80	97,969,264	98,639,969	3,974,646	4,718,840	24,644,709	333,497	-	-	1,038,160	724,663	-	-	-	661,601	-
1880-81	97,292,230	95,248,473	2,656,299	3,951,851	708,623	26,947,038	-	-	861,877	1,304,600	-	-	-	-	+7,002
1881-82	97,466,600	97,021,753	3,985,394	3,317,171	+10,553	26,703,708	-	-	670,160	1,500,443	-	-	-	1,268,669	-
1882-83	98,068,688	97,481,448	3,098,458	3,317,872	323,416	31,366,179	-	-	1,113,150	1,226,702	-	-	-	491,724	-
1883-84	99,735,650	100,076,878	3 0 4,600	3,301,180	346,630	33,72,108	-	-	1,167,000	1,208,000	-	-	-	1,068,700	-
1884-85	99,201,688	98,439,046	2,794,400	2,269,870	484,870	34,485,978	-	-	1,86,200	1,321,000	-	-	-	8 0 0,000	-
1884-85	98,466,618	96,566,320	3,166,000	3,240,260	3,240,260	33,967,069	-	-	1,884,200	1,927,800	-	-	-	1,079,600	-
TOTAL	-	-	87,189,872	92,326,161	25,346,379	-	6,638,481	4,330,180	89,164,145	8,229,228	6,748,470	8,229,228	6,748,470	26,681,697	8,768,683

Note.—The decrease in the transactions of the Guaranteed Railways in 1880-81, and in 1884 85, compared with the year immediately preceding is due to the removal of the East Indian and Eastern Bengal Railways from the category of Guaranteed Railways.

* This sum is thus arrived at—
 (a) Capital of East Indian Railway at time of purchase £ 26,200,000
 (b) 25 per cent. premium thereon £ 6,550,000
 Debenture and Debenture Stock £ 4,900,000
 Outlay subsequent to purchase £ 164,248
 TOTAL £ 37,854,248

† Interest on capital outlay calculated at 4½ per cent. to end of 1880-81, afterwards at 4 per cent., except on 1,000,000 £, lent by His Highness the Maharajah Holkar for the construction of the Holkar State Railway, on which 4½ per cent. is paid by the State
 ‡ Includes capital of Eastern Bengal Railway, as under—
 Subscribed Capital £ 2,568,480
 Debentures £ 1,023,700
 TOTAL £ 3,592,180 or Rs. 8,137,91 800.

§ For railway administrative purposes it will be convenient to start from 1st January 1880 with the capital "as it stood on the previous day (dates of purchase), viz., 30,876,866†" See Mr Jalandhar's Reports of 1881-82, page 19, paragraph 4

[Issue V—No. 8 A]

REVENUE ACCOUNTS OF THE STATE RAILWAYS FOR THE FINANCIAL YEAR 1881-82

Compiled from the Finance and Revenue Accounts of the Government of India.

RAILWAYS	Capital Expended to Close of Year	Gross Receipts	Working Expenses	Net Receipts.	Percentage Gained
	£	£	£	£	£
STATE RAILWAYS					
BROAD GAUGE					
Indus Valley - - - - -	6,726,397	542,580*	405,965*	136,615	2 03
Kandahar - - - - -	1,229,711	—	—	—	—
Panjab Northern					
Southern Section - - - - -	4,493,390	327,018*	286,750*	40,268	0 89
Northern Section - - - - -	2,462,485	—	—	—	—
Dhond and Mamnad - - - - -	996,784	14,048†	—	14,048	1 41
Patna-Gya - - - - -	385,593	53,637	34,118	19,519	5 06
Wardha Coal - - - - -	593,272	52,980	44,743	8,237	1 38
Sindia - - - - -	868,962	32,863	23,192	9,071	1 04
Ghazipur-Dildaragar - - - - -	67,987	4,113	3,580	533	0 78
Calcutta and South Eastern - - - - -	678,902	15,962	19,693	-3,731	-0 54
TOTAL - - - - -	£ 18,668,383	1,043,201	818,641	224,560	1 20
TOTAL, excluding Calcutta and South Eastern, Panjab Northern, and Indus Valley and Kandahar Railways } £ 2,912,598 157,641 106,233 51,408 1 78					
METRE GAUGE					
Rajputana-Malwa (including Holkar) - - - - -	9,018,159	1,012,348	581,520	430,828	4 77
Muttra-Hathras - - - - -	108,396	33,189	10,723	2,466	2 27
Muttra-Achnayra - - - - -	64,237	2,255	2,083	172	0 26
(Awampore-Farrukhabad - - - - -	319,888	33,340	22,697	10,643	3 32
Nagpur Chhattisgarh † - - - - -	824,836	41,870	24,602	17,268	2 09
Rangoon and Irrawaddy Valley - - - - -	1,287,96	152,933	89,676	63,257	4 91
Northern Bengal - - - - -	2,095,478*	192,741	96,046	96,695	4 61
Tirhoot - - - - -	559,439	57,878	34,904	22,974	4 10
TOTAL - - - - -	£ 14,277,229	1,506,654	862,231	644,303	4 51
4' 0 GAUGE					
Nalhati - - - - -	33,509	6,787	5,500	1,287	3 84
GRAND TOTAL - - - - -	£ 32,874,121	2,556,542	1,686,392	870,150	2 95
GRAND TOTAL, excluding Calcutta and South Eastern, Panjab Northern, Indus Valley, and Kandahar Railways } £ 17,223,336 1,670,992 973,984 696,998 4 04					
NATIVE STATES ‡					
BROAD GAUGE					
Nizam's - - - - -	1,227,552	78,966	46,220	32,746	2 66
Khamngon - - - - -	49,427	6,237	5,781	456	0 92
Amraoti - - - - -	44,567	7,914	4,473	3,441	7 72
TOTAL - - - - -	£ 1,321,546	93,117	56,474	36,643	2 77
METRE GAUGE					
Mysore - - - - -	401,146	17,399	10,364	7,035	1 75
Bhavnagar-Gondal - - - - -	811,345	80,148	48,728	31,420	3 87
TOTAL - - - - -	£ 1,212,491	97,547	59,092	38,455	3 17
GRAND TOTAL - - - - -	£ 2,533,037	190,664	115,566	75,098	2 96

* Include the Revenue and Working Expenses of the Kandahar State Railway, and of the Panjab Northern State Railway, Northern Section, respectively. As neither of these Sections was worked at a profit, and the figures cannot be given separately, the percentage gained has been worked out on the capital expended on the Sections classed as Productive.

† This line is worked by the Great Indian Peninsula Railway, and the Section is credited with a percentage of the net receipts only.

‡ This line was not opened throughout for the whole year.

§ Figures for the Gaskar's Railway by the official year are not available.

Calcutta,
22 March 1884 }

W Ogdon, Deputy Examiner,
Public Works Department.

L Conroy Gordon, Deputy Accountant General,
Public Works Department.

[Issue V—No 8 B]

REVENUE ACCOUNTS OF THE STATE RAILWAYS FOR THE FINANCIAL YEAR 1882-83.

Compiled from the Finance and Revenue Accounts of the Government of India, and from the orders on the Annual Accounts of Railways in Native States

RAILWAYS	Total Capital Expenditure to close of Year	Gross Receipts.	Working Expenses	Net Receipts	Percentage Gained
BROAD GAUGE					
Indus Valley - - - - -	£. 6,888,478	£ 519,279	£. 319,130	£ 200,149	2 90
Kandahar - - - - -	1,315,004	48,390	51,412	-3,022	-0 22
Punjab Northern - { Southern Section - -	4,549,929	231,908	176,327	55,581	1 22
{ Northern " - -	2,759,002	72,850	84,797	-11,947	-0 43
Dhond and Mammad - - - - -	1,002,461	15,999	-	15,999	1 59
Patna-Gya - - - - -	385,829	39,834	27,100	12,734	3 30
Wardha Coal - - - - -	609,783	67,287	45,442	21,845	3 58
Sindia - - - - -	885,225	32,030	23,830	8,200	0 92
Ghaspur-Dildarnagar - - - - -	72,189	4,847	4,169	678	0 93
Calcutta and South Eastern - - - - -	678,016	16,520	8,725	7,795	1 15
Sonarpur Diamond Harbour* - - - - -	223,646	5,487	2,898	2,589	1 15
Bhopal † - - - - -	125,000	1,438	1,976	-538	-0 43
TOTAL - - - - -	£ 19,493,593	1,055,869	745,806	310,063	1 59
TOTAL, excluding Calcutta and South-Eastern, Punjab Northern, Indus Valley and Kandahar Railways - - - - -	£ 3,304,134	166,922	105,415	61,507	1 86
METRE GAUGE					
Rajputana-Malwa (including Holkar) - - -	9,339,859	1,113,335	588,661	524,674	5 61
Muttra-Achneya - - - - -	62,911	7,138	5,812	1,326	2 10
Muttra Hathras - - - - -	113,911	11,709	7,511	4,198	3 68
Cawnpore and Farukhabad - - - - -	320,304	35,486	23,255	12,231	3 81
Nagpur Chhattisgarh - - - - -	930,066	85,890	49,135	36,755	3 95
Bangoon and Irrawaddy Valley - - - - -	1,346,423	158,688	98,816	59,872	4 44
Northern Bengal - - - - -	2,096,359	227,990	107,153	120,837	5 76
Trichoot - - - - -	945,914	70,981	44,032	26,929	4 17
TOTAL - - - - -	£ 14,855,747	1,711,217	924,395	786,822	5 29
4' 0" GAUGE					
Nalhati - - - - -	33,002	7,406	5,058	2,348	7 11
2' 6" GAUGE					
Kawra-Dhuria - - - - -	85,612	10,627	9,039	1,588	1 85
GRAND TOTAL - - - - -	£ 34,467,954	2,785,119	1,684,298	1,100,821	3 19
GRAND TOTAL, excluding Calcutta and South Eastern, Punjab Northern, Indus Valley and Kandahar Railways - - - - -	£ 18,278,493	1,896,172	1,043,907	852,265	4 66
NATIVE STATES †					
BROAD GAUGE					
Nizam's - - - - -	1,225,257	84,059	52,369	31,690	2 58
Khamgaon - - - - -	49,110	7,596	5,603	1,993	4 06
Amraoti - - - - -	44,454	8,514	4,636	3,878	8 72
TOTAL - - - - -	£ 1,318,821	100,169	62,608	37,561	2 85
METRE GAUGE					
Mysore - - - - -	429,895	29,998	18,787	11,211	2 62
Bhavangar-Gondal - - - - -	885,923	83,543	52,869	30,654	3 46
TOTAL - - - - -	£ 1,315,818	113,541	71,676	41,865	3 18
GRAND TOTAL - - - - -	£ 2,634,639	213,710	134,284	79,426	3 01

* This line was not open throughout for the whole year

† The figures shown against the Bhopal Railway represent the Capital expenditure from Imperial Funds and the Revenue receipts and expenses of the open Section (11½ miles) which has been constructed from Imperial Funds. The section under construction from funds provided by the Bhopal State has not yet been opened, and is therefore omitted

‡ Figures for the Gaeckwar's Railway by the official year are not available.

Calcutta,
22 March 1884 }W Ogden, Deputy Examiner,
Public Works Department.L Conway-Gordon,
Deputy Accountant General.

[Issue V—No. 8 C]
REVENUE ACCOUNTS OF THE STATE RAILWAYS FOR THE FINANCIAL YEAR 1883-84

Based on the Revised Estimates of 1883-84

RAILWAYS	Total Capital Expenditure to a mile of Year	Gross Receipts	Working Expenses	Net Receipts	Per-centage Gained.
STATE RAILWAYS					
BROAD GAUGE.					
Indus Valley - - - - -	7,084,478	647,500	352,500	295,000	4 15
Kandahar - - - - -	1,410,002	42,500	42,500	—	—
Punjab Northern - - - - -	4,650,829	245,000	170,000	75,000	1 61
	2,696,501	70,000	80,000	-10,000	-0 37
Dhond and Mammad* - - - - -	1,014,461	18,800	—	18,800	1 85
Patna-Gya - - - - -	384,330	47,000	23,900	23,100	6 10
Wardha Coal - - - - -	645,933	79,000	†21,000	58,000	8 98
Sindia - - - - -	890,326	25,300	11,100	14,200	1 69
Ghasipur-Dildarnagar - - - - -	72,689	3,500	1,300	2,200	3 04
Calcutta and South-Eastern † - - - - -	938,506	31,500	20,000	11,500	1 22
Amritsar Pathankote ‡ - - - - -	470,424	3,200	4,500	-1,300	-0 27
Bhopal †† - - - - -	125,000	2,400	2,900	-500	-0 40
TOTAL - - - - - £	20,383,379	1,215,700	729,700	486,000	2 38
TOTAL excluding Punjab Northern, Indus Valley and Kandahar Railways † - - - - £	4,541,569	210,700	84,700	126,000	2 77
METRE GAUGE					
Reputans-Malwa (including Holkar) - - - - -	9,082,759	1,320,000	690,000	630,000	6 50
Cawnpore Achlytra † - - - - -	999,825	57,500	38,000	19,500	1 95
Naxpur Chhattisgarh - - - - -	944,966	130,000	64,000	66,000	6 70
Rangoon and Irrawaddy Valley - - - - -	1,333,223	165,000	97,500	67,500	2 92
Rangoon and Sitang Valley** - - - - -	974,653	—	—	—	—
Northern Bengal - - - - -	2,241,121	211,000	125,000	86,000	3 77
Tirhoot - - - - -	1,219,409	95,000	66,000	29,000	2 37
Rewari Ferozapore † - - - - -	873,589	46,000	35,000	11,000	1 24
TOTAL - - - - - £	18,349,635	2,024,500	1,115,500	909,000	4 94
4' 0" GAUGE.					
Nalhati - - - - -	33,351	8,000	6,200	1,800	5 09
2' 6" GAUGE					
Kawnia-Dhuria - - - - -	91,612	14,000	10,500	3,500	3 82
GRAND TOTAL - - - - - £	38,879,977	3,262,200	1,861,900	1,400,300	3 63
GRAND TOTAL, excluding Punjab Northern, Indus Valley and Kandahar Railways † - - - - £	23,016,167	2,257,200	1,216,900	1,040,300	4 51
NATIVE STATES ††					
BROAD GAUGE					
Nizam's - - - - -	1,229,757	88,700	63,900	24,800	2 09
Khinnaon - - - - -	43,207	6,300	3,900	2,400	5 55
Amroli - - - - -	43,424	9,600	5,100	4,500	10 36
TOTAL - - - - - £	1,316,388	104,600	72,900	31,700	2 40
METRE GAUGE.					
Bhavnagar-Gondal - - - - -	922,946	91,000	56,200	34,800	3 77
GRAND TOTAL—NATIVE STATES - - - - - £	2,239,334	195,600	129,100	66,500	2 97

* The working of the line has been transferred to the Great Indian Peninsula Railway from 1st January 1881. The Government of India only gets a per centage of the gross receipts.

† Due to exceptional credit to working expenses by debit to Capital.

‡ As the transactions of the Calcutta and South Eastern Railway (Main Line) and the Sonarpur Diamond Harbour Branch have been amalgamated, the figures for the former cannot be deducted, as in the Statements for 1881-82 and 1882-83.

§ A section of this line (51 miles) was opened on 1st January 1884 only.

¶ The figures against the Bhopal Railway represent the Capital Expenditure from Imperial Funds, and the earnings and expenses of the open section (11½ miles), which has been constructed from Imperial Funds. The section under construction from funds provided by the Bhopal State is not yet opened, and has therefore been omitted.

** A section of this line (about 60 miles) was opened in February 1884 only. It is worked with the Rangoon and Irrawaddy Line and the revenue figures cannot therefore be given separately. The per-centage gained on the Rangoon and Irrawaddy Railway would have been much higher.

†† Figures for Mysore and Gaskwar's Railway not available.

Calcutta, } W. Ojeda, Deputy Examiner,
14 March 1884 } Public Works Department.

L. Conroy-Gordon, Deputy Accountant General,
Public Works Department.

ADMINISTRATIVE TRANSACTIONS OF THE STATE RAILWAYS FOR THE FINANCIAL YEAR 1881-82.

Compiled from the Orders on the Finance Accounts of the various Railways

RAILWAYS	CAPITAL CHARGES TO END OF YEAR					REVENUE					Percentage Gained, including Indirect Charges
	Direct	INDIRECT			TOTAL	Net Receipts	INDIRECT CHARGES APPERTAINING TO REVENUE			Net Receipts, less Indirect Charges	
		Loss by Exchange.	Capitalization of Abatement of Land Revenue.	Leave and Pension Allowances.			Loss by Exchange	Leave and Pension Allowances.	Indirect Establishment		
BROAD GAUGE	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	
Indus Valley - - - - -	6,72,63,965	21,82,150	1,17,891	12,65,375	8,37,25,908	13,66,154	15,416	1,34,292	1,684	12,14,762	1 45
Kandahar* - - - - -	1,28,97,115										
Punjab Northern		23,59,100	98,058	11,20,598	7,81,11,472	4,02,875	815	81,000	915	8,19,285	0 48
Southern Section - - - - -	4,49,38,899										
Northern* ,, - - - - -	2,46,24,847										
Dband and Mamrad - - - - -	99,07,839	5 59,953	57,566	1,37,085	1,07,22,443	1,40,475	- -	- -	376	1,40,009	1 30
Patna-Gya - - - - -	38,55,930	1,76,924	5,506	41,710	40,79,970	1,25,191	95	13,003	147	1,81,346	4 45
Wardha Coal - - - - -	59,32,722	95,345	4,087	75,869	61,08,043	82,368	1,063	5,997	119	74,284	1 21
Sindia - - - - -	86,80,619	2,44,827	13,866	1,43,094	90,01,406	90,712	- -	- -	193	80,519	0 99
Ghazipur-Dildarnuggur - - - - -	6,79,873	38	3,325	9,869	6,93,099	5,330	- -	- -	31	5,299	0 76
Calcutta and South-Eastern - - - - -	67,88,022	2,09,810	- -	- -	69,97,832	-37,310	21,792	5,110	76	-64,288	-0 91
TOTAL - - - Rs	18,56,33,831	58,08,047	2,04,789	27,98,584	19,45,30,261	22,45,590	40,081	2,40,002	3,541	19,61,906	1 00
TOTAL, excluding Calcutta and South Eastern Punjab Northern and Indus Valley and Kandahar State Railways - - - - -	<i>Rs</i> 2,91,25,983	10,76,987	84,350	4,07,641	3,06,94,961	5,14,071	2,058	19,000	866	4,92,147	1 00

0 61	METRE GAUGE											
	Rajputana-Malwa (including Holkar) - -	9,01,81,595	28,82,643	92,015	13,86,915	9,46,23,768	48,06,274	77,920	2,32,780	2,876	39,94,696	4 22
	Muttra-Achnera - - - - -	6,42,298	25,355	8,085	8,639	6,84,458	1,725	-	-	62	1,663	0 24
	Muttra-Bathras - - - - -	10,83,958	612	10,404	12,386	11,07,380	24,659	3,006	-1,598	75	23,176	2 09
	Nagpur and Chhattiagarh - - - -	82,38,353	3,50,779	10,419	1,31,196	87,89,747	1,72,635	272	8 102	252	1,64 059	1 87
	Cawnpore and Farukhabad - - - -	31,98,888	1,57,533	16,153	37,597	34,10,171	1,06,480	727	10,173	221	95,309	2 79
	Rangoon and Irrawaddy Valley - -	1,28,77,956	4,21,396	68,078	1,90,272	1,35,56,702	6,32,573	316	53,811	415	5,78,031	4 26
	Northern Bengal - - - - -	2,09,54,785	7,09,516	14,394	3,75,495	2,20,54,190	9,66,951	2,500	62,381	686	9,01,384	4 08
	Tirhoot - - - - -	55,94,391	2,50,996	5,885	99,879	59,50 901	2,29,739	749	16,053	219	2,12 718	3 57
TOTAL - - - Rs	14,27,72,295	47,87,800	2,26,023	22,41,179	15,00,27,297	64,48,036	85,490	3,81,702	4,806	59,71,038	3 98	
5 7 4	4' 0" GAUGE.											
	Nalhati - - - - -	3,35,092	36,894	-	6,000	3,77,786	12,873	1,161	3,568	73	8,271	2 18
	GRAND TOTAL - - - Rs	32,87,41,218	1,06,32,541	5,20,822	50,40,763	34,49,85,844	87,01,499	1,26,732	6,25,132	8,420	79,41,315	2 30
GRAND TOTAL, excluding Calcutta and South - Eastern, Punjab Northern and Indus Valley, and Kandahar State Railways - } Rs												
		17,22,33,370	59,01,461	3,10,373	26,54,820	18,11,00,044	69,60,880	88,799	4,04,070	5,745	64,71,466	3 57

* The indirect charges and revenue transactions cannot be shown separately, and the percentage gained has therefore been calculated on the total capital charges. But as the Kandahar Railway and the Northern Section of the Punjab Northern Railway were worked at a loss, the results for the sections classed as Productive would be much better.

Calcutta,
22 March 1884 }

W Ogden, Deputy Examiner,
Public Works Department

J. Conway (Gordon), Deputy Accountant General,
Public Works Department.

ADMINISTRATIVE TRANSACTIONS OF THE STATE RAILWAYS FOR THE FINANCIAL YEAR 1882-83

Compiled from the Orders on the Finance Accounts of the several Railways

RAILWAYS.	CAPITAL CHARGES.					REVENUE.					Per centage Gained, including Indirect Charges.
	Direct	INDIRECT			TOTAL.	Net Receipts	INDIRECT CHARGES APPERTAINING TO REVENUE			Net Receipts less Indirect Charges.	
		Loss by Exchange.	Capitalization of Abatement of Land Revenue.	Leave and Pension Allowances			Loss by Exchange	Leave and Pension Allowances	Indirect Establishment.		
BROAD GAUGE	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	
Indus Valley - - - - -	6,88,84,779	20,21,898	1,20,825	12,10,545	7,22,88,047	20,01,487	13,162	95,617	1,851	18,91,057	2 61
Kandahar - - - - -	1,31,50,038	1,71,874	-	66,288	1,33,88,200	-80,218	2,429	17,549	305	-60,586	0 87
Panjab, Northern											
Southern Section - - - - -	4,54,99,292	10,39,046	54,027	9,45,797	4,75,38,762	5,55,815	9,315	63,900	843	4,81,757	1 01
Northern „ - - - - -	2,75,60,014	14,59,708	60,655	2,01,031	2,93,01,498	-1,19,477	4,479	31,897	405	-1,56,268	0 83
Dhond and Manmad - - - - -	1,00,24,609	5,50,953	57,566	1,37,280	1,07,79,408	1,59,984	-	-	438	1,59,546	1 48
Patna-Gya - - - - -	36,68,295	1,58,577	5,506	41,710	40,64,088	1,27,345	114	10,431	171	1,16,629	2 86
Wardha Coal - - - - -	60,97,829	1,15,059	4,093	75,889	62,92,870	2,18,448	5,006	6,338	138	2,06,966	3 27
Sindia - - - - -	88,52,262	2,44,827	13,866	1,45,090	92,56,045	82,000	-	-	225	81,775	0 88
Ghasipur-Dildarnuggur - - - - -	7,21,892	38	3,325	0,863	7,35,118	6,778	-	-	36	6,742	0 91
Calcutta and South-Eastern - - - - -	67,80,467	2,09,455	-	-	69,89,919	77,950	348	3,800	128	73,679	1 05
Sonarpur-Diamond Harbour * - - - - -	22,36,459	-	-	-	22,36,458	25,889	-	-	-	25,889	1 15
Bhopal † - - - - -	12,50,000	-	-	-	12,50,000	-5,381	-	-	-	-5,381	-0 48
TOTAL - - - - -	Rs 19,49,35,926	59,81,125	3,19,863	28,33,493	20,40,70,407	31,00,625	34,848	2,29,630	4,340	28,31,607	1 39
TOTAL, excluding Calcutta and South Eastern, Panjab Northern, Indus Valley, and Kandahar State Railways - - - - -	Rs 3 30,41,346	10,78,454	84,356	4,09,832	3,46,13,988	6,16,063	5,120	16,767	1,008	5,92,108	1 71

0 61.	MIRAS GAUZE.											
	Rajputana-Malwa (including Holkar) - -	9,33,99,586	32,34,234	96,966	13,94,245	9,81,24,031	52,46,741	1,01,600	1,45,742	3,366	49,96,033	5-34
	Muttra-Achnera - - - - -	6,29,109	26,189	8,095	8,639	6,72,032	13,256	- -	- -	69	13,187	1 96
	Muttra-Hathras - - - - -	11,39,110	- -	10,404	12,386	11,61,900	41,981	—3,890	2,955	87	41,829	3 60
	Cawnpore and Farukhabad - - - -	32,08,040	1,53,917	16,168	37,597	34,10,607	1,22,309	2,642	8,180	258	1,11,229	3 26
	Nagpur and Chhatisgarh - - - - -	93,00,665	4,16,447	14,107	1,36,381	98,67,600	3,67,561	2,336	10,008	447	3,54,770	3 59
	Bangoon and Irrawaddy Valley - - -	1,34,64,233	4,71,588	68,078	1,89,618	1,41,93,517	5,99,714	480	45,914	483	5,31,837	3 88
	Northern Bengal - - - - -	2,09,63,588	7,17,026	14,394	3,75,495	2,20,70,503	12,08,376	2,800	41,697	840	11,63,039	5-26
	Tirhoot - - - - -	64,59,143	2,50,966	5,865	1,02,539	68,18,513	2,69,292	746	19,115	255	2,49,176	3 65
	TOTAL - - - Rs	14,86,57,474	52,70,267	2,34,082	22,56,900	15,63,18,703	78,68,230	1,07,714	2,73,611	5,805	74,81,100	4 78
5 6	4' 0" GAUZE											
	Nalhati - - - - -	3,30,915	37,163	- -	6,000	3,73,178	23,469	70	3,083	81	20,235	5 42
	2' 0" GAUZE											
Kawalia-Dhuria - - - - -	8,66,122	- -	- -	- -	8,56,122	15,863	- -	- -	- -	15,883	1 85	
GRAND TOTAL - - - Rs	34,46,79,537	1,12,86,555	5,33,925	50,96,393	36,16,18,410	1,10,08,207	1,42,632	5,06,324	10,226	1,03,49,025	3 86	
GRAND TOTAL, excluding Calcutta and South-Eastern, Panjab Northern, Indus Valley and Kandahar State Railways -												
	18 27,84,957	63,85,884	3,18,418	26,72,732	19,21,61,991	85,22,645	1,12,904	2,93,461	6,894	81,09,386	4 22	

* This line was not open throughout for the whole year

† The figures entered against the Bhopal Railway represent the Capital Expenditure from Imperial funds, and the revenue transactions of the open section (11½ miles) which has been constructed by the Imperial Government.

Calcutta, }
22 March 1884 }

W Ogden, Deputy Examiner,
Public Works Department.

L Conway-Gordon, Deputy Accountant General,
Public Works Department

ADMINISTRATIVE TRANSACTIONS OF THE STATE RAILWAYS FOR THE FINANCIAL YEAR 1883-84

Based on the Revised Estimates of 1883-84

RAILWAYS.	CAPITAL CHARGES					REVENUE					Per-centage Gained, including Indirect Charges.
	Direct	INDIRECT.			TOTAL	Net Receipts.	INDIRECT CHARGES APPERTAINING TO REVENUE			Net Receipts, less Indirect Charges	
		Loss by Exchange	Capitalization of Abatement of Land Revenue	Leave and Pension Allowances			Loss by Exchange.	Leave and Pension Allowances	Indirect Establishment		
BROAD GAUGE.	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	
Indus Valley - - - - -	7,08,44,779	1,40,000	4,000	7,000	7,09,95,779	20,50,000	58,000	97,000	2,000	27,93,000	3 93
Kandahar - - - - -	1,41,00,020	1,55,800	-	350	1,42,55,370	-	2,000	3,000	500	-5,500	0 03
Punjab Northern											
Northern Section - - - - -	4,65,03,292	-	4,600	3,300	4,65,21,192	7,50,000	10,000	43,000	1,000	6,96,000	1 49
Southern " - - - - -	2,69,65,012	-1,71,000	-	-	2,67,94,012	-1,00,000	5,000	21,000	500	1,26,500	0 47
Dhond and Manmad - - - - -	1,01,44,609	14,572	-	-	1,01,59,181	1,88,000	-	-	500	1,87,500	1 84
Patna Gya - - - - -	58,42,295	-	-	-	58,42,295	2,31,000	-	-	200	2,30,800	6 00
Wardha Coal - - - - -	64,50,399	6,400	-	100	64,55,829	5,80,000	1,000	12,300	150	5,66,050	8 75
Sindia - - - - -	89,03,262	-	-	90	89,03,352	1,42,000	-	-	300	1,41,700	1 50
Ghaspur-Dildarnuggur - - - - -	7,25,892	-	-	-	7,25,892	22,000	-	-	50	21,260	3 02
Calcutta and South Eastern * - - - - -	93,85,059	-1,000	-	-	93,84,059	1,15,000	3,800	28,000	150	83,050	0 88
Amritsar-Pathankot † - - - - -	47,04,336	28,100	2,130	11,100	47,33,566	-13,000	-	-	-	-13,000	-0 27
Bhopal ‡ - - - - -	12,50,000	-	-	-	12,50,000	-5,000	-	-	-	-5,000	-0 40
TOTAL - - - - -	<i>Rs</i> 20,38,38,785	1,60,072	10,730	26,940	20,40,31,527	48,60,000	79,800	2,04,800	5,350	45,70,050	2 24
TOTAL, excluding Punjab Northern, Indus Valley, and Kandahar State Railways * - - - - -	<i>Rs</i> 4,54,15,682	36,072	2,130	11,290	4,54,65,174	12,60,000	4,800	40,300	1,350	12,13,060	2 66

1910		MFTRE GAUGE											
Rajputana-Malwa (including Holkar) -	Rs	9,68,27,886	2,25,500	550	10,850	9,70,64,486	63,00,000	1,90,800	2,35,000	3,000	58,71,200	604	
Cawnpore-Achneyra † - - - -		99,98,248	36,000	-	15,000	1,00,49,248	1,95,000	200	10,000	650	1,84,150	163	
Nagpur and Chhattisgarh - - - -		98,49,665	57,600	-	10,900	99,18,165	6,60,000	2,300	34,000	600	6,23,200	633	
Rangoon and Irrawaddy Valley - - -		1,33,32,233	5,848	-	546	1,33,38,627	6,75,000	480	49,089	500	6,24,940	269	
Rangoon and Sittang Valley † - - -		97,46,538	1,41,572	1,170	58,835	99,35,109							
Northern Bengal - - - - -		2,28,11,911	12,000	517	3,600	2,28,27,928	8,80,000	11,000	42,000	1,000	8,06,000	353	
Tirhoot - - - - -		1,21,94,989	24,120	9,570	6,438	1,22,35,117	2,90,000	638	22,236	300	2,66,826	291	
Rewari-Persepore † - - - -		87,35,891	5,31,200	20,000	38,340	93,25,431	1,10,000	9,100	12,000	500	88,400	094	
TOTAL FOR NARROW GAUGE } STATE RAILWAYS - - - } Rs		18,34,96,355	10,33,840	31,807	1,21,509	18,46,83,511	90,90,000	2,14,518	4,04,316	6,450	84,64,716	456	
C. S.		4' 0" GAUGE											
Nalhati - - - - -		3,39,515	-879	-	-	3,32,636	18,000	1,517	3,087	200	14,246	427	
		2' 6" GAUGE											
Kawra Dhuria - - - - -		9,16,129	-	-	-	9,16,422	35,000	-	3,000	-	82,000	849	
GRAND TOTAL - - - - -	Rs	38,85,79,777	11,93,033	42,587	1,48,440	38,98,68,796	1,40,03,000	2,95,835	6,14,153	12,000	1,30,81,019	335	
GRAND TOTAL, excluding Punjab } Northern, Indus Valley, and } Kandahar State Railways - - - } Rs		23,01,61,674	10,60,033	33,937	1,32,799	23,13,97,443	1,40,03,000	2,20,835	4,50,153	10,000	97,24,012	429	

* As the transactions of the Calcutta and South Eastern Railway (Main Line) and Sonarpur-Diamond Harbour Branch have been amalgamated, the figures for the main line cannot be deducted as in similar Statements for 1881-82 and 1892-83

† A section of this line (51 miles) was opened on 1st January 1884 only

‡ The figures entered against the Bhopal Railway represent the Capital Expenditure from Imperial funds and the Revenue transactions of the open section (11½ miles) which has been constructed by the Imperial Government.

§ Not fully opened to traffic

|| A section of this line (about 60 miles) was opened towards the close of February 1884 only. As it is worked with the Rangoon and Irrawaddy Line the Revenue figures cannot be given separately. The results for the Rangoon and Irrawaddy Valley Railway alone would be much better

Calcutta, }
24 March 1884 }

W Ogden,
Deputy Examiner, Public Works Department.

L Comway-Gordon, Deputy Accountant General,
Public Works Department.

[Issue V—No. 10 A]

**REVENUE ACCOUNTS OF THE GUARANTEED RAILWAYS FOR THE HALF-YEAR
ENDING 30TH JUNE 1882.**

Compiled from the Statistics of Indian Railways.

RAILWAYS.	Total Capital Expenditure on Open Lines, excluding Suspense	Gross Earnings	Working Expenses	Net Earnings	Percentage Gained	
					For the Half-year	Yearly Rate.
BROAD GAUGE.						
Great Indian Peninsula - - - -	Rs 25,17,34,416	Rs 2,14,11,628*	Rs 86,95,710*	Rs 1,27,15,918	5 05	10 19
Sind, Punjab, and Delhi - - - -	11,56,87,938	52,14,490	35,58,344	16,56,146	1 43	2 86
Madras - - - - -	11,11,18,519	35,02,064	22,46,872	12,55,192	1 13	2 26
Bombay, Barods, and Central India - -	8,41,70,476	61,39,962	23,74,516	37,65,446	4 47	8 94
Eastern Bengal - - - - -	5,45,76,650	21,17,618	11,09,764	10,07,754	2 91	5 92
Oudh and Rohilkhand - - - - -	5,85,77,791	30,01,470	18,22,312	11,79,158	2 01	4 02
TOTAL - - - Rs	65,58,65,790	4,13,87,132	1,98,07,518	2,15,79,614	3 29	6 58
METRE GAUGE						
South Indian - - - - -	4,29,31,262	19,00,227	11,42,981	7,57,246	1 76	3 62
GRAND TOTAL - - - Rs	69,87,97,052	4,32,87,359	2,09,50,499	2,23,36,860	3 20	6 40

* Exclusive of gross earnings and expenses of State Lines worked

Calcutta, }
24 March 1882 }W Ogden, Deputy Examiner,
Public Works Department.L Conroy Gordon, Deputy Accountant General,
Public Works Department.

[Issue V.—No. 10 B]

**REVENUE ACCOUNTS OF THE GUARANTEED RAILWAYS FOR THE HALF-YEAR
ENDING 31ST DECEMBER 1882**

Compiled from the Statistics of Indian Railways.

RAILWAYS.	Total Capital Expenditure on Open Lines, excluding Suspense.	Gross Earnings.	Working Expenses	Net Earnings.	Percentage Gained	
					For the Half-year	Yearly Rate.
BROAD GAUGE						
Great Indian Peninsula - - - -	Rs 25,22,49,649	Rs 1,30,50,903*	Rs 76,16,987*	Rs 54,33,916	2 15	4 30
Sind, Punjab, and Delhi - - - -	11,60,15,535	48,17,834	30,63,100	17,54,734	1 51	3 02
Madras - - - - -	11,15,44,508	34,16,507	21,00,857	13,15,650	1 18	2 36
Bombay, Barods, and Central India - -	8,47,31,902	40,36,227	27,90,801	12,45,426	1 47	2 94
Eastern Bengal - - - - -	3,45,95,393	40,08,207	13,77,524	26,30,683	7 60	15 20
Oudh and Rohilkhand - - - - -	5,87,01,518	22,61,373	16,39,160	6,22,213	1 06	2 12
TOTAL - - - Rs	65,78,38,505	3,15,91,051	1,85,88,429	1,30,02,622	1 98	3 96
METRE GAUGE						
South Indian - - - - -	4,30,21,429	18,58,487	12,13,405	6,45,082	1 49	2 98
GRAND TOTAL - - - Rs	70,08,59,934	3,34,49,538	1,98,01,834	1,36,47,704	1 94	3 88

* Exclusive of gross earnings and expenses of State Lines worked

Calcutta, }
24 March 1884 }W Ogden, Deputy Examiner,
Public Works Department.L Conroy Gordon, Deputy Accountant General,
Public Works Department.

[Issue V—No. 10 C]

REVENUE ACCOUNTS OF THE GUARANTEED RAILWAYS FOR THE HALF-YEAR
ENDING 30TH JUNE 1883.

Compiled from the Statistics of Indian Railways

RAILWAYS	Total Capital Expenditure on Open Lines, excluding Suspense	Gross Earnings.	Working Expenses	Net Earnings.	Percentage Gained.	
					For the Half-year	Yearly Rate.
BROAD GAUGE.						
Great Indian Peninsula	Rs 25,29,02,701	Rs 2,18,20,892*	Rs 92,08,242*	Rs 1,26,12,650	4 98	9-96
Sind, Punjab, and Delhi	11,69,42,544	62,71,216	35,82,419	26,88,797	2 29	4 58
Madras	11,16,33,336	33,65,901	21,15,717	12,50,184	1 12	2 24
Bombay, Baroda, and Central India	8,54,94,530	71,57,624	27,02,709	44,54,915	5 21	10 42
Eastern Bengal	3,46,36,017	27,58,262	14,22,437	13,35,825	3 85	7 70
Oudh and Rohilkhand	5,88,55,141	29,32,606	15,58,411	13,74,195	2 33	4 66
TOTAL	Rs 66,05,04,269	4,43,06,501	2,05,89,935	2,37,16,566	3 89	7-18
METRE GAUGE						
South Indian	4,32,21,542	19,14,955	12,35,672	6,79,283	1 57	3 14
GRAND TOTAL	Rs 70,37,25,811	4,62,21,456	2,18,25,607	2,43,95,849	3 46	6 92

* Exclusive of gross earnings and expenses of State Lines worked

Calcutta, }
24 March 1884 }

W Ogden, Deputy Examiner,
Public Works Department.

L Conway-Gordon, Deputy Accountant General,
Public Works Department.

[Issue V.—No 10 D.]

APPROXIMATE REVENUE ACCOUNTS OF THE GUARANTEED RAILWAYS FOR THE
HALF-YEAR ENDING 31ST DECEMBER 1883.

Compiled from Estimates obtained from Local Officers

RAILWAYS	Total Capital Expenditure on Open Lines, excluding Suspense.	Gross Earnings.	Working Expenses	Net Earnings	Percentage Gained.	
					For the Half year	Yearly Rate
BROAD GAUGE						
Great Indian Peninsula	(a) 25,35,00,000	1,26,80,000	79,00,000	47,80,000	1 88	3 76
Sind, Punjab, and Delhi	12,25,70,000	53,14,918	31,95,560	21,22,358	1 73	3 46
Madras	11,17,22,361	32,45,826	19,98,530	12,47,296	1 11	2 22
Bombay, Baroda, and Central India	(a) 8,60,00,000	47,30,000	24,40,000	22,90,000	2 66	5 32
Eastern Bengal	3,46,07,358	25,90,957	12,55,823	13,35,134	3 83	7 66
Oudh and Rohilkhand	(a) 5,90,00,000	25,30,000	15,00,000	10,30,000	1 74	3 48
TOTAL	Rs 66,75,99,719	3,10,91,701	1,82,30,913	1,28,10,788	1 91	3 62
METRE GAUGE						
South Indian	4,32,77,001	19,53,000	13,13,000	6,40,000	1 46	2 96
GRAND TOTAL	Rs 71,08,76,720	3,30,44,701	1,95,93,913	1,34,50,788	1 89	2 96

(a) Estimated, the local estimates apparently include stores

Calcutta, }
24 March 1884 }

W Ogden, Deputy Examiner,
Public Works Department

L Conway-Gordon, Deputy Accountant General,
Public Works Department.

[Issue V—No. 11.]

REVENUE ACCOUNT OF THE EAST INDIAN RAILWAY

Compiled from the Statistics of Indian Railways

HALF-YEARS.	Capital Expended on Open Lines to end of Half year	Gross Earnings.	Working Expenses.	Net Earnings	Percentage Gained	
					For the Half-year	Yearly Rate
Ending 30th June 1882	Rs 35,56,47,143	Rs 2,32,06,227	Rs 85,76,092	Rs 1,66,30,135	4 95	9-90
" 31st December 1882	33,77,59,915	2,19,11,367	88,28,991	1,50,82,376	3 87	7 74
" 30th June 1883	33,90,36,916	2,61,71,262	92,61,722	1,69,09,540	4 96	9 96
" 31st December 1883 (approximate)	34,11,34,316	2,32,87,800	90,40,904	1,42,46,896	4 17	8 34

Calcutta, }
24 March 1884 }

W Ogden, Deputy Examiner,
Public Works Department.

L Conway-Gordon, Deputy Accountant General,
Public Works Department.

[Issue V—No 12 A]

**REVENUE ACCOUNTS OF THE STATE RAILWAYS FOR THE HALF-YEAR ENDING
30TH JUNE 1882.**

Compiled from the Statistics of Indian Railways and Half-yearly Accounts

RAILWAYS	Total Capital Expenditure on Open Lines, exclusive of Suspense	Gross Earnings	Working Expenses	Net Earnings	Percentage Gained	
					For the Half-year	Yearly Rate.
BROAD GAUGE.						
Indus Valley - - - - -	Rs. 6,52,77,888	Rs. 24,07,740*	Rs. 17,28,079*	Rs. 6,79,661	1 04	2 08
Kandahar - - - - -	1,24,10,597	—	—	—	—	—
Punjab Northern						
Southern Section - - - - -	4,38,15,112	16,97,068*	13,50,023*	*3,47,045	0 79	1 58
Northern - - - - -	1,54,33,811	—	—	—	—	—
Dhond and Mamnad - - - - -	99,60,397	3,98,042	3,14,202	83,840	0 84	1 68
Fatna-Gya - - - - -	36,98,501	2,91,152	1,62,340	1,28,812	3 48	6 96
Wardha Coal - - - - -	58,10,040†	3,49,860	2,77,632	72,228	1 24	2 48
Sinda - - - - -	87,02,834	1,81,231	1,26,337	54,894	0 63	1 26
Ghaspur-Dildarnagar - - - - -	5,99,672	26,431	30,148	6,283	1 04	2 08
Calcutta and South-Eastern - - - - -	67,20,634	1,03,746	1,49,777	-48,031‡	-0 68	-1 36
Rhopal - - - - -	4,18,639	2,376	1,073	1,303	0 31	0 62
TOTAL - - - - - Rs.	17,28,47,920	54,57,646	41,29,611	13,28,035	0 76	1 52
TOTAL, excluding Calcutta and South-Eastern, Punjab Northern, Indus Valley and Kandahar State Railways - - - - -						
	2,91,90,083	12,49,092	9,01,732	3,47,360	1 18	2 36
METRE GAUGE.						
Rajputana-Malwa (including Holkar) - - - - -	8,61,76,062	62,56,590	29,39,281	83,17,309	3 85	7 70
Muttra-Acheyra - - - - -	6,22,039	32,296	29,249	-3,047	0 49	0 98
Muttra-Hathras - - - - -	10,60,212	65,607	66,588	-4,081‡	-0 59	-0 78
Cawnpore-Farukhabad - - - - -	31,14,115	1,94,754	1,31,408	63,351	2 03	4 06
Nagpur and Chhattisgarh - - - - -	62,99,267	4,10,265	1,94,669	2,15,596	3 42	6 84
Rangoon and Irrawaddy Valley - - - - -	1,25,91,838	9,60,973	4,95,540	4,65,433	3 70	7 40
Northern Bengal - - - - -	2,04,30,926	9,98,202	5,13,831	4,84,371	2 37	4 74
Tirhoot - - - - -	5,18,390	3,43,553	1,87,629	1,55,924	2 63	5 26
TOTAL - - - - - Rs.	13,62,02,849	92,59,140	45,58,190	47,00,950	3 45	6 90
4' 0" GAUGE						
Nalhati - - - - -	3,07,780	37,179	29,403	7,776	2 52	5 04
GRAND TOTAL - - - - - Rs.	30,93,58,549	1,47,53,965	87,17,204	60,36,761	1 95	3 90
GRAND TOTAL, excluding Calcutta and South-Eastern, Punjab Northern, Indus Valley and Kandahar State Railways - - - - -						
	16,57,00,712	1,05,45,411	54,89,325	50,56,086	3 05	6 10
NATIVE STATES						
BROAD GAUGE						
Nizam's - - - - -	1,21,78,172	4,44,564	2,21,129	2,23,435	1 83	3 66
Khamngon - - - - -	4,91,381	50,373	26,840	23,533	4 79	9 58
Amraoti - - - - -	4,45,267	57,981	28,341	29,590	6 64	13 28
TOTAL - - - - - Rs.	1,31,14,820	5,52,868	2,76,310	2,76,558	2 10	4 20
METRE GAUGE						
Bhavnagar-Gondal - - - - -	81,50,365	5,82,185	2,72,056	3,10,129	3 61	7 22
Mysore - - - - -	40,23,842	1,29,987	64,737	65,250	1 62	3 24
TOTAL - - - - - Rs.	1,21,74,207	7,12,192	3,36,793	3,75,389	3 06	6 16
2' 6" GAUGE						
Gankwar's - - - - -	12,49,657	85,958	51,383	34,575	2 76	5 52
GRAND TOTAL, NATIVE STATES - - - - - Rs.	2,65,38,684	13,51,008	6,64,486	6,86,522	-2 58	5 16

* These figures include the earnings and expenses of the Kandahar Railway and of the Northern Section, Punjab Northern State Railway. The figures cannot be given separately but as these sections were not worked at a profit, the per centage gained has been calculated on the Capital Expenditure on the sections classed as Productive.

† Includes 7,04,710 rupees expended on the Warora Colliery

‡ Losses during the half-year due to exceptional charges for renewals of engines.

Calcutta, }
24 March 1884. }

W Ogden, Deputy Examiner,
Public Works Department.

L Conway-Gordon, Deputy Accountant General,
Public Works Department.

[Issue V.—No 12 B]
**REVENUE ACCOUNTS FOR THE STATE RAILWAYS FOR THE HALF-YEAR ENDING
 31ST DECEMBER 1882**

Compiled from the Statistics of Indian Railways and Half-yearly Accounts

RAILWAYS	Total Capital Expenditure on Open Lines, exclusive of Suspense	Gross Earnings	Working Expenses	Net Earnings	Percentage Gained	
					For the Half year	Yearly Rate.
STATE RAILWAYS						
BROAD GAUGE						
Indus Valley - - - - -	Rs 6,58,47,831	Rs 24,96,911	Rs 15,69,642	Rs 9,27,269	1 40	2 80
Kandahar - - - - -	1,26,08,283	2,07,910	2,38,727	-30,817	-0 24	-0 48
Punjab, Northern						
Southern Section - - - - -	4,41,39,091	10,98,110	8,51,434*	2,46,676	0 55	1 10
Northern - - - - -	1,69,32,882	3,35,934	4,20,038	-84,704	-0 80	-1 00
Dhond and Manmad - - - - -	99,25,269	3,41,516	2,66,164	75,352	0 75	1 50
Patna-Gya - - - - -	37,97,742	2,55,012	1,68,119	86,893	2 28	4 56
Wardha Coal - - - - -	58,67,379*	2,45,763	2,19,704	26,059	0 44	0 88
Sindia - - - - -	87,35,891	1,48,069	1,10,732	37,337	0 42	0 84
Ghazipur-Dildarnagar - - - - -	6,24,104	18,825	18,429	396	0 06	0 12
Calcutta and South-Eastern - - - - -	67,20,634	89,730	41,768	47,962	0 71	1 42
Sonarpur-Diamond Harbour - - - - -	12,75,624	16,603	15,105	3,498	0 27	0 54
Bhopal† - - - - -	4,45,863	12,000	10,600	1,400	0 31	0 62
TOTAL - - - - - Rs	17,69,20,593	52,65,783	39,28,462	13,37,321	0 75	1 50
TOTAL, excluding Calcutta and South-Eastern, Punjab Northern, Indus Valley and Kandahar State Railways						
	Rs 3,06,71,872	Rs 10,37,788	Rs 8,06,853	Rs 2,30,935	0 75	1 50
METRE GAUGE						
Rajputana-Maleru (including Holkar) - - - - -	8,74,13,883	46,73,040	28,61,096	18,11,944	2 07	4 14
Muttra-Achnaya - - - - -	6,26,164	35,497	29,339	6,158	0 98	1 96
Muttra Hathras - - - - -	10,47,748	63,872	30,690	33,182	3 16	6 32
Cawnpore Farakhabad - - - - -	31,31,013	1,64,057	1,10,299	53,758	1 71	3 42
Nagpur and Chhattisgarh † - - - - -	87,95,174	1,94,122	2,20,547	-26,425	-0 80	-0 80
Rangoon and Irrawaddy Valley - - - - -	1,26,82,785	6,14,717	4,49,720	1,64,997	1 30	2 60
Northern Bengal - - - - -	2,05,17,179	11,47,708	5,38,326	6,09,382	2 96	5 92
Turkoot - - - - -	64,47,495	3,16,469	2,18,347	98,122	1 62	3 04
TOTAL - - - - - Rs	14,06,61,421	72,09,482	44,58,564	27,50,918	1 95	3 90
4' 0" GAUGE						
Nalbat - - - - -	3,11,210	34,496	22,954	11,542	3 70	7 40
2' 6" GAUGE						
Kanwa Dhurka - - - - -	8,41,170	49,883	48,455	1,428	0 17	0 34
GRAND TOTAL - - - - - Rs	31,87,34,394	1,25,59,644	84,58,415	41,01,229	1 28	2 56
GRAND TOTAL, excluding Calcutta and South-Eastern, Punjab Northern, Indus Valley and Kandahar State Railways						
	Rs 17,24,85,673 [‡]	Rs 83,31,649	Rs 53,36,806	Rs 29,94,843	1 73	3 46
NATIVE STATES.						
BROAD GAUGE.						
Nizam's - - - - -	1,21,86,480	4,14,854	2,63,190	1,51,664	1 24	2 48
Khamgaon - - - - -	4,82,570	25,593	18,737	6,856	1 42	2 84
Amroht - - - - -	4,34,338	27,216	17,270	9,946	2 28	4 56
TOTAL - - - - - Rs	1,31,03,388	4,67,663	2,99,197	1,68,466	1 28	2 56
METRE GAUGE						
Bhavnagar Gondal - - - - -	83 60,328	2,94,652	2,50,133	44,519	0 53	1 06
Mysore - - - - -	37,10,516	1,58,393	1,20,159	38,234	1 03	2 06
TOTAL - - - - - Rs	1,20,70,844	4,53,045	3,70,292	82,753	0 68	1 36
2' 6" GAUGE.						
Gaskwar's - - - - -	12,52,277	58,064	45,892	12,172	0 97	1 94
GRAND TOTAL, NATIVE STATES - - - - - Rs	2,64,26,509	9,78,772	7,15,381	2,63,391	0 99	1 98

* Includes 7,04,710 rupees expended on the Warora Colliery

† The figures against the Bhopal Railway represent the Capital Expenditure from Imperial funds, and the earnings and expenses of the open section (11½ miles) which has been constructed from Imperial Funds. The section under construction from funds provided by the Bhopal State has not yet been opened.

‡ Not open throughout for the whole of the half-year

Calcutta. }
 24 March 1884 }

W. Ojeda, Deputy Examiner,
 Public Works Department

L. Conroy-Gordon, Deputy Accountant General,
 Public Works Department.

[Issue V—No. 12 C]

**REVENUE ACCOUNTS OF STATE RAILWAYS FOR THE HALF-YEAR ENDING
30TH JUNE 1883.**

Compiled from the Statistics of Indian Railways and Half yearly Accounts

RAILWAYS.	Total Capital Expenditure on Open Lines, exclusive of Suspense.	Gross Earnings.	Working Expenses.	Net Earnings	Percentage Gained	
					For the Half-year	Yearly Rate.
STATE RAILWAYS.						
BROAD GAUGE.						
India Valley	6,68,99,970	37,52,004	18,67,770	18,84,234	2 81	5 69
Kandahar	1,32,63,154	2,36,147	2,48,117	8,030	0 06	0 12
Punjab, Northern :						
Southern Section	4 44,28,132	12,02,745	8,87,191	3,15,554	0 71	1 42
Northern	2,68,91,464	3,84,307	3 95,886	-11,279	-0 04	-0 08
Dhond and Masnad	1,00,30,922	4,50,153	3,40,731	1,09,422	1 09	2 18
Patna Gya	37,01,093	2,49,176	89,753	1,59,423	4 31	8 62
Wardha Coal	59,80,881*	4,47,026	2,11,453	2,35,573	7 93	7 86
India	89,52,272	1,71,582	90,343	81,249	0 90	1 80
Ghaspur Dildarnagar	6,93,057	30,394	14,978	15,386	2 22	4 44
Calcutta and South-Eastern	87,19,184	91,469	16,744	74,725	1 11	2 22
Sonarpur Diamond Harbour	21,98,613	69,073	40,833	28,140	1 28	2 56
Bhopal	5,52,947	13,451	19,592	-6,141	-1 05	-2 10
TOTAL	19,03,44,639	70,97,497	42,03,181	28,94,316	1 52	3 04
TOTAL, excluding Calcutta and South Eastern, Punjab Northern, India Valley and Kandahar State Railways						
	3,21,42,785	14,30,825	8,07,773	6,23,052	1 93	3 86
METRE GAUGE.						
Rajputana-Malwa (including Holkar)	8,59,35,272	68,71,856	32,16,104	36,56,752	4 25	8 50
Rewari-Rosopore †	27,23,820	1,16,995	70,155	46,840	1 61	3 22
Muttra-Achnytra	6,25,787	39,728	28,372	11,356	1 81	3 62
Muttra-Hathras	11,28,318	66,136	40,336	25,800	2 28	4 56
Cannore and Farukhabad	31,39,200	1,92,870	1,16,385	76,485	2 43	4 86
Nagpur and Chhattisgarh	91,87,840	9,83,116	3,73,241	6,09,875	6 67	13 34
Rangoon and Irrawaddy Valley	1,30,99,746	9,63,813	5,45,113	4,18,700	3 19	6 38
Northern Bengal	2,05,38,929	11,87,288	5 76,089	6,11,219	2 97	5 94
Tirhoot	1,09,74,748	4,29,269	2,90,535	1,38,734	1 27	2 54
TOTAL	14,73,03,660	1,08,51,071	52,55,310	55,95,781	3 79	7 58
4' 0" GAUGE.						
Nalhati	3,07,780	44,027	29,876	14,151	4 59	9 18
2' 6" GAUGE.						
Kawra-Dhuria	8,75,485	63,463	51,444	12,019	1 37	2 74
GRAND TOTAL	33,88,31,564	1,80 56,058	95,39,811	85,16,247	2 51	5 02
GRAND TOTAL, excluding Calcutta and South-Eastern, Punjab Northern, India Valley and Kandahar State Railways						
	18,06,29,710	1,23,89,886	61,44,403	62,44,983	3 45	6 90
NATIVE STATES						
BROAD GAUGE.						
Nizam's	1,21,92,949	4,27,931	3,11,106	1,16,826	0 95	1 90
Khamgaon	4,82 570	48,149	27,739	20,410	4 23	8 46
Amroht	4,84 338	71,176	33,313	37,863	8 71	17 42
TOTAL	1,31,09,857	5 47,256	3,72,157	1,75,099	1 33	2 66
METRE GAUGE.						
Bhavnagar-Gondal	86,75,353	5,87,694	3,08,181	2,79 513	3 22	6 44
Mysore	40,23,980	1,39,555	1,14,516	25,039	0 62	1 24
TOTAL	1,26,99,333	7,27,249	4,22,697	3,04,552	2 39	4 78
2' 6" GAUGE.						
Gaekwar's	11,53,590	93,320	58,382	34,938	3 02	6 84
GRAND TOTAL, NATIVE STATES	2,69,62,780	13,67,825	8,53,236	5,14,589	1 90	3 90

* Includes 7,04,710 rupees expended on Warora Colliery

† A section of this line was open for about three months only

Calcutta, } W Ogden, Deputy Examiner,
24 March 1884. } Public Works Department.

L. Conway-Gordon, Deputy Accountant General,
Public Works Department

[Issue V.—No 12 D]

APPROXIMATE REVENUE ACCOUNTS OF THE STATE RAILWAYS FOR THE HALF-YEAR ENDING 31ST DECEMBER 1883¹

Compiled from Estimated Figures obtained from Local Officers.

RAILWAYS	Estimated Capital Expenditure on Open Line, excluding Suspense.	Gross Earnings.	Working Expenses.	Net Earnings	Per-centage Gained	
					For the Half-year	Yearly Rate
BROAD GAUGE						
Indus Valley - - - - -	Rs. 67,00,000*	Rs. 80,22,885	Rs. 16,84,625	Rs. 15,38,270	1-08	3-08
Kandahar - - - - -	1,35,00,000*	2,30,129	2,42,030	-11,901	-0-09	-0-18
Punjab Northern						
Southern Section - - - - -	4,50,00,000*	11,98,905	9,28,788	2,71,117	0-60	1-20
Northern " - - - - -	2,57,50,000*	3,55,207	3,14,072	42,135	0-16	0-32
Dhond and Mannad - - - - -	1,00,64,757	3,72,686	2,89,968	82,717	0-82	1-64
Patna-Gya - - - - -	38,66,519	2,21,016	86,196	1,34,820	3-40	6-98
Wardha Coal - - - - -	63,93,756	3,17,688	-38,112	3,55,800	5-58	11-12
Sindia - - - - -	89,54,482	1,67,257	65,230	1,02,027	1-14	2-28
Ghazipur-Dildarnagar - - - - -	6,98,460	20,346	16,000	4,346	0-63	1-26
Calcutta and South Eastern †	91,20,277	1,84,838	1,04,708	30,132	0-33	0-66
Bhopal † - - - - -	5,90,000	12,122	15,116	-2,994	0-50	1-10
TOTAL - - - - - Rs	19,14,28,260	60,55,083	37,08,914	23,46,469	1-23	3-44
TOTAL, excluding Punjab Northern, Indus Valley and Kandahar State Railways † - - - - -	3,96,78,260	12,46,947	5,39,089	7,06,848	1-77	3-54
NARROW GAUGE.						
Rajputana Malwa - - - - -	9,07,00,000*	57,04,000	33,38,935	23,65,065	2-60	5-20
Cawnpore-Achmeyra - - - - -	50,50,000*	2,77,000	1,81,000	96,000	1-90	3-80
Nagpore and Chhattisgarh - - - - -	95,33,891	3,46,792	2,63,002	73,790	0-78	1-52
Hanagon and Irrawaddy Valley - - - - -	1,31,87,505	5,39,073	4,86,408	1,39,667	1-01	2-02
Northern Bengal - - - - -	2,15,00,000*	11,06,938	5,53,751	5,54,182	2-57	5-14
Tirhoot - - - - -	1,17,14,705	4,52,108	3,23,308	1,22,195	1-04	2-06
Rewari-Ferozapore - - - - -	32,65,000*	1,80,600	1,77,223	3,377	0-10	0-20
TOTAL - - - - - Rs	15,50,51,502	86,56,471	68,08,326	39,48,140	2-16	4-32
4' GAUGE.						
Nalhati - - - - -	3,33,862	86,815	26,104	10,711	3-27	6-54
2' 6" GAUGE						
Kawasa-Dhuria - - - - -	8,90,000‡	65,000‡	50,000‡	15,000‡	1-68	3-86
GRAND TOTAL - - - - - Rs	34,77,03,624	1,48,13,369	90,68,043	57,20,328	1-64	3-28
GRAND TOTAL, excluding Punjab Northern, Indus Valley and Kandahar State Railways † - - - - -	19,50,63,024	1,00,04,238	59,23,528	40,80,705	2-08	4-16
NATIVE STATES.						
BROAD GAUGE						
Nizam's - - - - -	1,22,11,715	4,25,589	3,04,483	1,21,106	0-99	1-98
Channagon - - - - -	4,90,998	14,509	13,251	2,258	0-46	0-92
Amraoti - - - - -	4,44,800	24,938	16,460	8,478	1-91	3-82
TOTAL - - - - - Rs	1,31,47,571	4,65,081	3,33,194	1,31,887	1-00	2-00
METRE GAUGE						
Bhavnagar-Gondal - - - - -	90,40,921	3,06,414	3,50,537	46,877	0-51	1-02
Mysore - - - - -	43,08,796	1,63,380	88,230	75,050	1-74	3-48
TOTAL - - - - - Rs	1,33,58,017	4,69,894	3,47,767	1,21,927	0-91	1-82
GRAND TOTAL, NATIVE STATES - - - - - Rs	2,65,05,588	9,34,775	6,80,961	2,53,814	0-96	1-92

* Estimated—Figures furnished by Examiners include Expenditure on unopen lines, and suspense.

† As the transactions of the Calcutta and South-Eastern (Main Line) and Sonarpur-Diamond Harbour Branch have been amalgamated, the figures for the Main Line cannot be deducted as in Returns for previous half years

‡ The figures against the Bhopal Railway represent the Capital Expenditure on, and earnings and expenses of, the open section which has been constructed from Imperial Funds.

§ Estimated—No figures received from Examiner

Calcutta } W. O'Brien, Deputy Examiner
24 March 1884. } Public Works Department.

L. Conway-Gordon, Deputy Accountant General,
Public Works Department.

EXPORTS OF WHEAT FROM INDIA FROM YEAR 1871-72 TO DECEMBER 1883.

TO	1871-72.	1872-73	1873-74.	1874-75	1875-76	1876-77	1877-78	1878-79.-	1879-80	1880-81	1881-82	1882-83	1883-84, Nine Months April to December 1883
	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.	Cwt.
United Kingdom	249,093	198,771	1,358,092	399,492	2,076,849	4,837,208	5,731,349	855,082	1,626,976	4,808,233	9,379,236	6,575,160	2,784,321
Austria	-	1,187	-	25,495	5,970	2,068	891	-	-	3,401	28,421	6,000	-
Belgium	-	-	-	-	-	171,146	7,998	-	30,321	226,156	2,625,227	1,456,898	2,318,240
France	594	-	27,614	259,359	178,587	561,805	116,674	11,012	74,164	1,846,750	5,308,073	3,567,712	2,901,981
Germany	-	-	-	-	-	7,007	-	-	-	-	38,201	-	-
Holland	-	-	-	-	-	-	-	-	-	365,354	712,390	578,246	192,750
Italy	109	-	18,488	93,778	26,408	65,920	24,128	-	25,577	196,526	359,318	176,068	397,000
Malta	-	-	5,859	33,045	10,097	191,881	41,074	-	-	61,806	107,681	163,358	-
Spain	-	-	-	-	-	-	-	-	-	-	-	1,500	-
Gibraltar	-	-	-	8,000	-	-	-	-	-	-	28,804	494,098	-
Other Countries in Europe	-	-	-	-	-	-	-	-	-	78	40,653	26,379	-
Cape of Good Hope	-	-	-	-	-	18	22,151	16,804	-	-	184	777	-
Eastern Coast of Africa	7,011	6,512	5,416	7,398	5,986	7,495	6,803	6,122	7,458	8,959	5,122	6,476	-
Egypt	-	-	-	12,428	-	-	105,216	-	-	-	919,036	799,550	2,911,909
Mauritius	62,568	80,378	111,872	89,511	96,475	102,848	154,888	44,398	30,686	78,789	62,076	64,706	-
Réunion	20,960	16,396	53,153	38,451	-	41,793	26,107	49,653	40,479	36,205	39,013	42,323	-
Aden	5,977	21,773	8,908	15,943	21,491	13,278	26,184	21,530	29,548	47,954	35,148	140,132	-
Arabia	14,232	3,695	88,082	80,707	24,931	2,789	7,140	1,235	66,010	106,295	97,446	17,327	-
Ceylon	21,091	21,755	45,347	24,740	23,535	22,340	26,922	17,059	11,268	13,192	58,552	9,735	-
Java	4,476	735	5,515	2,375	-	12,383	-	-	147	-	-	-	-
Makram and Bonminai	-	-	-	-	-	-	-	160	850	2,544	2,486	1,371	-
Persia	209,299	8,429	325	290	95	-	9	67	22,383	77,980	267	-	-
Straits Settlements	47,247	32,323	26,346	37,028	29,709	43,202	29,007	20,853	19,439	20,677	18,398	12,589	-
Turkey in Asia	-	-	-	-	-	-	-	-	204,171	108,347	-	-	-
Australia	-	-	-	-	-	438	12,000	10	1	17	23	60	-
Other Countries	1,115	2,188	1,617	866	3,052	207	712	125	28	57	1,955	844	464,863
TOTAL (extracted from the Annual Statements of the Trade and Navigation of British India)	637,099	394,010	1,755,954	1,078,076	2,948,185	5,583,386	6,340,150	1,044,709	2,195,550	7,444,375	19,863,520	14,144,407	18,921,064
TOTAL (taken from Statistical Abstracts relating to British India from 1871-72 to 1880-81)	637,099	394,010	1,755,954	1,078,655	2,510,768	5,586,604	6,378,168	1,056,720	2,201,515	7,444,375	10,901,005	-	-

N.B.—The Annual Statements of the Trade and Navigation of British India show the exports of Indian products, while the Statistical Abstracts show exports of Indian products, together with imported foreign products re-exported.

Calcutta, 18 February 1884.

IMPORTS OF WHEAT INTO ENGLAND FROM THE YEAR 1875 TO 1883

FROM	1875	1876	1877.	1878.	1879.	1880	1881	1882.	1883.
	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>
Russia - - - - -	9,895,295	8,769,260	10,833,000	9,032,980	7,975,144	2,880,108	4,018,895	9,571,021	13,293,858
Denmark - - - - -	493,599	262,518	—	—	—	—	—	—	—
Germany - - - - -	5,615,984	2,324,148	5,455,763	5,118,185	3,616,419	1,608,275	1,361,724	3,088,921	2,871,095
France - - - - -	1,286,920	298,850	1,494,783	11,200	17,793	1,446	6,698	7,379	9,498
Turkey - - - - -	1,808,137	1,238,851	1,258,018	240,105	11,500	4,005	33,532	526,439	1,128,074
Roumania - - - - -									
Egypt - - - - -	2,002,863	2,218,227	2,447,709	217,498	2,064,397	1,590,957	1,070,488	174,862	1,174,391
United States:									
On the Atlantic - - - - -	23,463,910	19,299,785	12,437,594	24,377,477	29,049,981	29,589,502	24,796,551	20,347,230	14,259,195
On the Pacific - - - - -			8,871,073	4,586,424	6,926,824	6,550,387	11,241,523	14,712,393	11,806,837
Chili - - - - -	900,880	982,619	736,011	50,573	1,372,481	1,343,360	1,091,303	1,656,361	2,310,126
British India - - - - -	1,334,943	3,379,867	6,104,940	1,819,304	887,256	3,247,242	7,308,842	8,477,479	11,243,497
Australia - - - - -	-	-	425,897	1,459,850	2,245,657	4,267,748	2,978,130	2,475,127	2,691,614
British North America - - -	3,604,610	2,417,151	2,912,178	2,608,586	4,676,686	3,893,544	2,860,854	2,684,828	1,798,056
Other Countries - - - - -	1,678,232	3,308,356	1,186,122	294,561	366,168	147,120	58,779	259,991	1,090,968
TOTAL - - - - -	51,786,393	44,894,152	54,162,888	49,811,643	59,363,140	55,197,304	57,042,669	64,171,622	64,080,444

N.B.—The above figures have been extracted from the "Economist" newspaper. It is noticeable that the exports of wheat from India now equal the amount exported from the United States on the Pacific, and that in the year 1883 the total exports from America to England fell off to the extent of nearly nine million hundredweights.

Calcutta, 12 February 1884.

EXPORTS OF SEEDS (INDIAN PRODUCE) FROM INDIA FROM THE YEAR 1871-72 TO 1882-83.

FROM	1871-72	1872-73	1873-74.	1874-75	1875-76	1876-77	1877-78	1878-79	1879-80	1880-81	1881-82.	1882-83 *
	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>	<i>Cwt.</i>
United Kingdom - - - -	2,585,873	1,180,876	1,938,408	2,693,570	6,593,168	5,487,258	7,963,796	4,432,382	3,271,193	5,592,153	4,470,526	6,408,071
Austria - - - - -	-	6	1,500	2,408	148	450	381	402	1,343	1,198	1,501	206
Belgium - - - - -	2,143	-	-	-	168,347	468,514	261,051	-	89,540	203,667	667,200	1,001,164
France - - - - -	849,297	429,410	696,292	1,211,378	2,152,307	2,476,217	3,051,392	1,747,455	2,701,225	2,256,180	4,028,248	3,023,964
Germany - - - - -	-	-	-	-	-	43,403	2,700	-	-	1,800	8,285	5,638
Holland - - - - -	864	-	1,350	-	84,856	88,386	236,199	118,202	37,407	311,692	226,659	254,014
Italy - - - - -	1,175	22	73,370	82,114	135,440	112,366	191,068	273,602	308,094	341,510	495,820	445,773
Malta - - - - -	-	-	-	-	-	-	39,706	-	-	-	-	-
Spain - - - - -	42,357	8,390	-	-	2,300	-	12,525	13,914	-	10,842	-	-
Gibraltar - - - - -	-	-	-	-	-	-	-	-	-	-	48,282	48,994
Eastern Coast of Africa - - - -	-	-	-	-	801	913	1,121	943	1,754	2,829	1,854	1,846
Egypt - - - - -	-	-	-	52	33,562	73,354	37,488	16,102	786	461	96,961	631,388
Mauritius - - - - -	4,800	1,719	2,094	3,937	4,503	21,148	9,020	3,817	5,713	5,015	6,926	1,558
South America - - - - -	-	-	-	-	119	416	27,302	289	251	218	409	842
United States - - - - -	1,563,296	1,156,081	1,488,355	2,019,398	1,255,349	748,001	669,233	538,291	733,582	369,286	230,526	321,688
West Indies - - - - -	-	-	-	-	-	-	17,500	22,009	-	-	-	8
Aden - - - - -	408	1,579	485	897	4,981	789	794	2,796	1,919	6,708	5,227	4,179
Arabia - - - - -	2,215	1,557	1,620	3,848	18,691	2,989	2,589	3,506	7,185	9,109	7,367	7,527
Ceylon - - - - -	26,297	23,839	21,165	27,702	36,393	35,938	46,355	42,978	31,592	44,587	41,340	44,647
China (Hong Kong) - - - - -	-	-	-	-	2,457	1,332	307	488	117	397	898	939
Java - - - - -	1,293	-	396	737	251	-	-	-	-	-	-	-
Maldives - - - - -	222	306	121	209	168	207	274	324	157	165	160	126
Perak - - - - -	847	891	695	213	599	237	106	410	732	5,312	760	616
Straits Settlements - - - - -	18,976	13,000	7,718	19,050	17,976	24,969	16,110	20,904	23,653	23,968	25,268	25,362
Australia - - - - -	-	-	-	-	-	3,537	4,283	1,723	4,008	10,434	4,537	7,594
Other Countries - - - - -	15,098	2,074	4,753	4,243	4,281	819	740	-	-	1,688	101,756	2,067
TOTAL - - - - -	5,124,785	2,779,243	4,433,270	6,074,756	10,568,822	9,582,865	12,187,020	7,299,497	7,270,719	10,299,190	10,466,098	13,139,296

Note.—Extracted from the Annual Statements of the Trade and Navigation of British India.

* Preliminary figures are shown in this Column.

Calcutta, 10 March 1884

IMPORTS OF IRON INTO INDIA FROM THE YEAR 1871-72 TO 1882-83.

0 61.

FROM	1871-72.	1872-73	1873-74	1874-75.	1875-76	1876-77	1877-78	1878-79	1879-80.	1880-81	1881-82	1882-83 *
United Kingdom	Cwt 1,068,666	Cwt 796,801	Cwt 866,757	Cwt 1,522,721	Cwt 2,007,065	Cwt 2,227,744	Cwt 2,422,086	Cwt 2,344,056	Cwt 2,092,709	Cwt 2,048,767	Cwt 2,434,441	Cwt 3,071,164
Belgium	-	-	-	-	-	498	-	-	-	-	-	65,068
France	-	-	-	-	94	164	251	908	49	09	132	51
Holland	-	-	1,458	1,794	350	2,385	-	2,090	-	-	-	1,202
Italy	-	-	-	-	180	69	-	163	908	1,786	867	-
Eastern Coast of Africa	-	-	343	-	864	37	16	141	1,365	85	-	1,866
United States (America)	-	-	-	2,547	1,071	-	-	189	87	-	-	-
Ceylon	-	-	-	-	10,918	9,853	5,254	6,843	6,329	5,919	7,802	6,125
Straits Settlements	-	-	13,168	-	1,076	4,538	312	860	668	211	1,378	1,356
Australia	-	-	-	-	-	2,096	9	15	1	19	58	400
Austria	-	-	-	-	186	1	3	-	-	1	-	-
Other Countries	11,532	8,586	10,179	10,300	2,076	3,871	3,840	10,207	5,086	9,317	8,329	4,700
TOTAL	1,106,118	746,477	891,902	1,537,362	2,023,846	2,251,198	2,437,721	2,365,306	2,111,166	2,065,604	2,452,607	3,161,955

Note—Extracted from the Annual Statements of the Trade and Navigation of British India

* Preliminary figures are shown in this Column

Calcutta, 10 March 1884.

5 22 32

IMPORTS OF STEEL INTO INDIA FROM THE YEAR 1871-72 TO 1882-83

FROM	1871-72.	1872-73	1873-74.	1874-75	1875-76	1876-77	1877-78	1878-79	1879-80	1880-81	1881-82	1882-83.*
United Kingdom	Cwt 86,931	Cwt 21,915	Cwt 9,384	Cwt 31,029	Cwt 80,809	Cwt 104,798	Cwt 23,074	Cwt 69,349	Cwt 95,689	Cwt 80,638	Cwt 172,044	Cwt 205,087
Egypt	-	3	80	3	11	610	100	41	-	-	-	-
Ceylon	-	-	-	-	-	-	-	64	215	1,146	9	1,064
Straits Settlements	-	-	-	-	1,116	2,780	599	1,399	100	61	14	80
Belgium	-	-	-	-	-	-	-	-	-	-	-	5,945
Other Countries	114	221	611	151	140	554	698	691	9	1,202	1,822	774
TOTAL	87,045	22,139	9,995	31,183	82,166	108,642	87,441	71,475	95,959	83,047	174,789	212,000

Note.—Extracted from the Annual Statements of the Trade and Navigation of British India.

* Preliminary figures are shown in the Column.

Calcutta, 10 March 1884

[Issue VII.—No. 1 A.]

STATEMENT SHOWING THE MILEAGE, AVERAGE AGE, COST, AND GENERAL RESULTS OF WORKING OF ALL INDIAN RAILWAYS UP TO THE YEAR 1880.
See page 272 of the Director General's Report for 1880-81.

N.B.—The figures in this Statement have been taken from the Half-yearly Revenue Accounts The figures relating to the Steamboat Service have been omitted

Y E A R.	Miles Open at End of Year	Mean Mileage Open during Year	Mean Age of Lines at End of Year	Capital Outlay at Close of Year	Cost per Mile Open	Gross Earnings during Year	Working Expenses during Year	Net Profits of Year	Per-centage on Capital Cost of			Gross Earnings per Mile per Week	R E M A R K S	
									Gross Earnings	Working Expenses.	Net Profits.			
EAST INDIAN RAILWAY														
1854	37 76	18 70	0 36	-	-	98,280	58,005	35,275	-	-	-	-	131	
1855	120 60	113 02	1 05	-	-	6,36,210	8,30,548	3,05,662	-	-	-	-	109	
1856	120 50	120 50	2 05	-	-	10,48,369	4,25,896	6,22,473	-	-	-	-	167	
1857	120 50	120 50	3 05	-	-	14,59,306	5,56,354	9,02,952	-	-	-	-	232	
1858	139 50	125 19	3 51	-	-	18,23,919	8,48,021	9,75,898	-	-	-	-	279	
1859	286 50	249 33	2 59	-	-	32,68,702	14,72,107	18,16,505	-	-	-	-	253	
1860	370 25	304 40	2 88	-	-	36,65,092	17,79,274	18,92,818	-	-	-	-	231	
1861	560 75	490 10	2 68	-	-	53,63,060	25,02,719	28,80,341	-	-	-	-	240	
1862	877 50	638 49	2 41	-	-	63,86,874	34,36,702	29,50,172	-	-	-	-	192	
1863	933 00	923 97	3 26	-	-	1,08,44,651	59,65,320	48,79,231	-	-	-	-	222	
1864	1,104 00	1,057 13	3 71	-	-	1,39,81,130	70,75,628	68,55,602	-	-	-	-	253	
1865	1,127 50	1,128 64	4 68	-	-	1,82,50,754	81,78,114	1,00,71,640	-	-	-	-	311	
1866	1,127 50	1,127 50	5 83	-	-	2,19,89,019	97,28,447	1,22,60,565	-	-	-	-	374	
1867	1,223 00	1,223 00	5 60	-	-	2,35,33,695	1,15,09,210	1,20,24,485	-	-	-	-	369	
1868	1,353 00	1,353 00	6 60	-	-	2,43,88,184	1,09,48,821	1,34,39,363	-	-	-	-	345	
1869	1,353 00	1,353 00	7 60	-	-	2,81,41,539	1,25,00,890	1,56,40,652	-	-	-	-	399	
1870	1,358 00	1,353 00	8 60	-	-	2,99,05,157	1,30,63,749	1,68,42,408	-	-	-	-	424	
1871	1,503 25	1,503 25	8 74	-	-	2,65,15,841	1,14,96,674	1,50,19,167	-	-	-	-	398	
1872	1,503 25	1,503 25	9 74	-	-	2,88,53,069	1,19,56,058	1,68,97,011	-	-	-	-	368	
1873	1,503 25	1,503 25	10 74	32,17,25,967	2,14,021	2,99,35,196	1,16,00,980	1,83,34,216	9 31	3 61	5 70	382		
1874	1,503 25	1,503 25	11 74	38,22,38,040	2,14,361	3,71,69,144	1,32,67,702	2,39,01,442	11 53	4 12	7 41	474		
1875	1,503 25	1,503 25	12 74	32,27,05,358	2,14,732	2,93,07,977	1,16,00,138	1,77,07,839	9 08	3 59	5 49	374		
1876	1,503 25	1,503 25	13 74	34,31,23,313	2,14,950	3,54,43,718	1,24,34,645	2,30,09,073	10 97	3 85	7 12	452		
1877	1,503 25	1,503 25	14 74	38,42,03,444	2,15,668	4,43,08,210	1,40,40,134	3,02,66,078	13 67	4 33	9 34	565		
1878	1,508 25	1,508 25	15 74	32,53,69,088	2,16,440	3,97,88,891	1,41,57,895	2,56,78,096	12 21	4 35	7 96	607		
1879	1,504 25	1,504 25	16 73	32,34,21,094	2,18,993	4,32,87,420	1,42,03,061	2,90,84,359	13 14	4 31	8 88	552		
1880	1,504 25	1,504 25	17 73	33,03,08,294	2,19,643	4,28,14,430	1,41,53,658	2,87,60,772	12 99	4 28	8 71	549		
1881	1,504 25	1,504 25	18 73	33,20,62,798	2,21,185	4,54,11,472	1,44,63,162	3,09,48,310	13 65	4 35	9 30	581		
1882	1,506 75	1,506 75	19 73	33,77,59,915	2,24,184	4,71,17,594	1,74,05,063	2,97,12,511	13 95	5 15	8 90	601		
1883	1,508 25	1,508 21	20 08	34,11,34,316	2,26,691	4,94,59,083	1,83,02,626	3,11,56,436	14 49	5 36	9 13	680		

EASTERN BENGAL RAILWAY

1900	1899	107-25	1976	0-18	-	-	-	96,656	53,731	42,925	-	-	-	-	-	-	94
	1894	107-25	107-25	1-18	-	-	-	8,32,921	4,03,380	4,29,541	-	-	-	-	-	-	149
	1864	111-25	110-75	2-13	-	-	-	10,15,049	5,44,741	4,70,308	-	-	-	-	-	-	176
	1865	111-25	111-25	3-13	-	-	-	13,51,424	6,61,987	6,89,437	-	-	-	-	-	-	233
	1866	111-25	111-25	4-13	-	-	-	14,15,041	7,22,863	6,93,078	-	-	-	-	-	-	243
	1867	111-25	111-25	5-13	-	-	-	16,19,833	7,88,971	8,30,864	-	-	-	-	-	-	279
	1868	111-25	111-26	6-13	-	-	-	17,87,154	8,28,037	9,59,117	-	-	-	-	-	-	308
	1869	111-25	111-25	7-13	-	-	-	18,14,151	9,12,291	9,01,860	-	-	-	-	-	-	313
	1870	111-25	111-25	8-13	-	-	-	19,42,823	10,82,049	9,60,774	-	-	-	-	-	-	333
	1871	156-25	156-25	6-79	-	-	-	21,98,314	12,31,267	9,67,047	-	-	-	-	-	-	270
	1872	156-25	156-25	7-79	-	-	-	28,02,173	18,65,279	9,36,894	-	-	-	-	-	-	344
	1873	158-00	158-87	8-70	3,05,37,109	1,93,273	-	30,84,504	15,13,798	15,70,706	10-10	4-06	5-14	-	-	-	377
	1874	158-00	158-00	9-70	3,16,15,099	2,00,096	-	35,64,841	18,60,141	17,04,700	11-27	5-88	5-39	-	-	-	433
	1875	158-00	158-00	10-70	3,16,80,302	2,01,774	-	29,34,327	18,23,909	11,10,418	9-20	5-72	3-48	-	-	-	356
	1876	158-00	158-00	11-70	3,20,75,662	2,03,011	-	39,01,877	14,41,286	18,60,091	10-29	4-49	5-80	-	-	-	401
	1877	158-00	158-00	12-70	3,21,03,753	2,03,188	-	43,56,002	17,17,556	26,38,446	13-56	5-35	8-21	-	-	-	529
	1878	158-00	158-00	13-70	3,23,89,022	2,06,260	-	42,16,988	17,48,489	24,68,499	13-94	6-36	7-58	-	-	-	512
	1879	158-00	158-00	14-70	3,30,17,629	2,08,972	-	40,65,812	17,80,403	22,85,409	12-31	5-39	6-92	-	-	-	494
	1880	158-00	158-00	15-70	3,31,68,524	2,08,085	-	44,51,318	19,07,547	25,43,771	13-42	5-75	7-67	-	-	-	540
	1881	159-75	159-75	16-70	3,46,50,090	2,16,902	-	57,02,042	23,32,761	33,69,281	16-45	6-73	9-72	-	-	-	686
	1882	159-75	159-75	17-70	3,45,95,393	2,16,559	-	61,25,725	24,87,288	36,38,437	17-70	7-19	10-51	-	-	-	737
	1883	159-75	159-75	18-70	3,48,47,358	2,17,886	-	53,49,219	26,78,260	26,70,059	15-36	7-69	7-67	-	-	-	644

*Excluding the length from Kooshtea engine shed to old Kooshtea (three quarters of a mile)

Partly estimated.

Partly estimated

ODDH AND ROHILKHAND RAILWAY:

1867	42-00	29-11	0-69	-	-	-	-	1,12,166	1,19,986	7,820	-	-	-	-	-	-	74
1868	42-00	42-00	1-69	-	-	-	-	2,62,647	1,69,521	93,126	-	-	-	-	-	-	120
1869	42-00	42-00	2-69	-	-	-	-	2,12,925	1,74,041	38,884	-	-	-	-	-	-	97
1870	42-00	42-00	3-69	-	-	-	-	2,45,793	5,60,232	2,14,489	-	-	-	-	-	-	112
1871	42-00	42-00	4-69	-	-	-	-	2,86,144	1,77,541	78,603	-	-	-	-	-	-	117
1872	293-50	144-17	1-16	-	-	-	-	4,22,760	2,89,922	1,32,838	-	-	-	-	-	-	56
1873	456-50	387-51	1-59	3,02,03,680	66,164	-	-	11,23,900	8,19,458	8,04,442	3-72	2-71	1-01	-	-	-	56
1874	533-00	540-50	2-33	4,64,67,380	85,971	-	-	20,04,020	12,90,826	7,13,194	4-31	2-78	1-53	-	-	-	72
1875	543-75	542-01	3-31	5,07,05,050	93,251	-	-	27,51,244	16,42,745	11,08,499	5-42	3-94	2-18	-	-	-	97
1876	543-75	543-75	4-31	5,29,66,230	97,409	-	-	34,11,422	21,81,020	12,30,402	6-44	4-12	2-32	-	-	-	120
1877	543-75	543-75	5-31	5,42,39,610	99,751	-	-	43,41,805	22,74,305	20,67,600	8-00	4-19	3-81	-	-	-	163
1878	546-75	544-25	6-28	5,50,82,280	1,00,745	-	-	46,22,037	25,06,568	21,15,469	8-39	4-55	3-84	-	-	-	163
1879	546-75	546-75	7-28	5,59,73,380	1,02,375	-	-	43,44,843	26,24,907	18,19,936	7-76	4-51	3-25	-	-	-	183
1880	546-75	546-75	8-28	5,77,96,380	1,05,709	-	-	44,56,150	25,50,740	19,04,410	7-71	4-41	3-30	-	-	-	167
1881	546-85	546-85	9-28	5,84,40,769	1,06,868	-	-	49,28,731	29,53,082	19,75,099	8-43	5-05	3-38	-	-	-	173
1882	546-85	546-85	10-28	5,87,01,518	1,07,345	-	-	52,62,943	34,61,472	18,01,371	8-96	5-86	3-10	-	-	-	185
1883	548-25	547-37	11-25	5,90,00,000	1,07,615	-	-	54,62,606	30,58,411	24,04,195	9-25	5-18	4-07	-	-	-	191

SIND, PUNJAB, AND DELHI RAILWAY

1861	109-75	70-06	0-64	-	-	-	-	2,11,207	2,05,460	5,747	-	-	-	-	-	-	58
1862	141-75	133-07	1-43	-	-	-	-	7,76,082	6,07,683	1,68,399	-	-	-	-	-	-	112
1868	141-75	141-75	2-43	-	-	-	-	12,56,861	10,45,747	2,18,104	-	-	-	-	-	-	171

Partly estimated

STATEMENT showing the Mileage, Average Age, Cost, and General Results of Working of all Indian Railways up to the Year 1880—*continued*

Y E A R.	Miles Open at End of Year	Mean Mileage Open during Year	Mean Age of Locomotives at End of Year	Capital Outlay at Close of Year	Cost per Mile Open	Gross Earnings during Year	Working Expenses during Year	Net Profits of Year	Per-centage on Capital Cost of			Gross Earnings per Mile per Week	RE M A R K S	
									Gross Earnings	Working Expenses	Net Profits			
SIND, PUNJAB, AND DELHI RAILWAY—contd.														
				<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs.</i>				<i>Rs.</i>		
1864	-	141 75	141 75	3 43	-	12,51,843	10,92,345	1,59,498	-	-	-	170		
1865	-	349 75	285 36	2 21	-	14,93,936	12,27,676	2,66,260	-	-	-	101		
1866	-	349 75	349 75	3 21	-	21,21,223	16,79,002	4,42,221	-	-	-	116		
1867	-	408 25	375 53	3 71	-	23,53,695	21,07,930	2,45,965	-	-	-	121		
1868	-	408 25	408 25	4 71	-	23,59,764	22,58,168	1,01,596	-	-	-	112		
1869	-	621 25	543 35	3 95	-	33,04,109	26,66,257	6,37,852	-	-	-	117		
1870	-	663 50	644 74	4 65	-	46,78,353	35,63,191	11,05,252	-	-	-	140		
1871	-	663 50	663 50	5 65	-	42,25,118	41,86,072	39,046	-	-	-	122		
1872	-	663 50	663 50	6 65	-	46,41,649	39,80,908	6,60,643	-	-	-	134		
1873	-	663 50	663 50	7 65	9,04,02,458	1,36,251	53,16,035	36,50,505	16,65,530	5 88	4 04	1 84	154	
1874	-	663 50	663 50	8 65	8,44,36,811	1,27,260	66,02,995	36,54,750	29,48,245	7 82	4 33	3 49	191	
1875	-	663 50	663 50	9 65	10,36,23,458	1,56,177	55,84,762	35,79,913	20,05,850	5 39	3 46	1 94	161	
1876	-	663 50	663 50	10 65	10,41,58,735	1,56,984	64,37,104	43,15,083	21,22,021	6 18	4 14	2 04	186	
1877	-	663 50	663 50	11 65	10,46,37,469	1,57,705	83,37,081	45,91,305	37,45,776	7 97	4 39	3 58	241	
1878	-	663 50	663 50	12 65	10,61,38,240	1,59,997	80,81,779	48,90,305	31,91,474	7 61	4 61	3 00	234	
1879	-	663 50	663 50	13 65	10,89,27,371	1,64,171	1,09,65,615	60,94,732	48,71,083	10 07	5 60	4 47	317	
1880	-	663 50	663 50	14 65	11,04,52,484	1,68,470	1,21,67,588	63,64,358	57,83,230	11 02	5 78	5 24	352	
1881	-	663 50	663 50	15 65	11,61,01,033	1,74,983	1,01,74,147	70,97,486	30,76,661	8 76	6 11	2 65	294	
1882	-	663 50	663 50	16 65	10,60,15,535	1,59,788	1,03,49,295	66,84,078	36,65,217	9 76	6 30	3 46	299	
1883	-	737 00	714 89	16 00	12,25,70,000	1,66,309	1,15,96,134	67,68,979	48,17,155	9 45	5 52	3 93	302	Partly estimated.
MADRAS RAILWAY:														
1856	-	65 00	32 77	0 50	-	1,27,863	65,058	61,805	-	-	-	75		
1857	-	80 50	75 15	1 34	-	3,55,102	1,68,762	1,89,340	-	-	-	91		
1858	-	95 50	89 83	2 07	-	4,33,762	2,40,889	1,92,873	-	-	-	93		
1859	-	95 50	95 50	3 07	-	6,06,769	3,66,155	2,40,614	-	-	-	122		
1860	-	136 50	129 51	3 10	-	7,91,500	5,81,760	2,09,740	-	-	-	117		
1861	-	290 50	241 89	2 24	-	11,45,172	8,13,998	3,31,174	-	-	-	91		
1862	-	448 75	392 79	2 37	-	17,16,671	12,70,751	4,45,920	-	-	-	84		
1863	-	446 75	446 75	3 37	-	25,53,504	17,50,964	8,02,540	-	-	-	110		
1864	-	569 50	491 81	3 31	-	34,09,057	16,91,491	17,17,566	-	-	-	133		
1865	-	609 00	582 70	4 24	-	44,18,249	20,18,527	23,99,782	-	-	-	145		
1866	-	643 25	623 36	4 96	-	47,80,942	21,81,509	25,99 433	-	-	-	147		
1867	-	643 25	643 25	5 96	-	51,38,099	22,23,125	29,14,974	-	-	-	153		
1868	-	675 75	654 11	6 64	-	61 76,100	25,62,820	36,13,280	-	-	-	181		
1869	-	708 50	698 22	7 32	-	61,37,801	30,17,661	31,20,140	-	-	-	171		
1870	-	781 50	709 66	7 52	-	53,80,501	28,33,023	25,47,478	-	-	-	146		

0 61.	1871	810 00	823 62	8 07	-	-	59,90,455	30,71,093	29,19,362	-	-	-	139
	1872	810 00	830 00	9 07	-	-	62,05,653	32,83,962	29,66,691	-	-	-	143
	1873	858 00	842 49	9 76	10,52,09,935	1,22,622	68,83,350	39,19,378	29,63,972	6 54	2 72	2 82	157
	1874	858 00	858 00	10 76	10,59,20,106	1,23,048	59,06,500	38,19,533	20,86,967	5 57	3 60	1 97	132
	1875	858 00	8 8 00	11 76	10,63,19,302	1,23,915	64,29,752	45,18,602	19,11,150	6 05	4 25	1 80	144
	1876	858 00	858 00	12 76	10,66,82,346	1,24,338	71,13,773	45,79,778	25,33,995	6 67	4 29	2 38	159
	1877	8 8 00	858 00	13 76	10,87,19,585	1,26,713	100,85,295	59,47,403	40,87,892	9 23	5 47	3 76	225
	1878	858 00	858 00	14 76	10,99,59,654	1,28,158	66,30,174	50,42,194	15,87,980	6 03	4 59	1 44	148
	1879	858 00	858 00	15 76	11,05,95,550	1,28,899	66,26,486	45,51,310	20,75,170	5 99	4 11	1 88	148
	1880	858 00	858 00	16 76	11,08,58,385	1,29,202	61,62,545	42,05,409	19,57,136	5 56	3 79	1 77	138
	1881	859 25	859 25	17 79	11,10,37,589	1,29,417	63,11,313	42,35,456	20,75,857	5 68	3 81	1 87	141
	1882	859 25	859 25	18 79	11,15,44,508	1,29,572	69,18,671	43,47,729	25,70,842	6 20	3 95	2 50	154
	1883	859 25	859 25	19 79	11,17,22,361	1,30,023	66,11,727	41,14,247	2,97,480	5 91	3 68	2 23	148
SOUTH INDIAN RAILWAY.													
	1861	48 25	9 53	0 20	-	-	37,371	17,969	19,902	-	-	-	77
	1862	81 75	75 42	1 04	-	-	2,38,607	1,06,033	1,33,574	-	-	-	61
	1863	81 75	81 76	2 04	-	-	3,13,899	1,40,001	1,73,898	-	-	-	74
	1864	81 75	81 75	3 04	-	-	2,95,279	1,69,929	1,25,350	-	-	-	69
	1865	99 25	93 16	3 45	-	-	3,84,396	1,90,381	1,94,016	-	-	-	79
	1866	143 75	102 79	3 10	-	-	5,71,077	2,81,709	2,89,968	-	-	-	106
6 I	1867	160 50	152 19	3 72	-	-	6,85,132	3,40,264	3,44,868	-	-	-	86
	1868	184 00	182 00	4 24	-	-	9,46,331	4,11,646	4,34,685	-	-	-	90
	1869	184 00	184 00	5 24	-	-	8,13,028	5,23,940	2,89,088	-	-	-	84
	1870	184 00	184 00	6 24	-	-	8,09,549	5,05,148	3,04,401	-	-	-	84
	1871	184 00	184 00	7 24	-	-	8,15,882	4,52,665	3,61,319	-	-	-	84
	1872	184 00	184 00	8 24	-	-	8,42,022	4,78,872	3,63,180	-	-	-	87
	1873	184 00	184 00	9 24	1,53,11,600	82,426	11,53,212	5,76,462	6,76,750	7 53	3 76	7 37	120
	1874	184 00	184 00	10 24	1,53,21,663	82,182	9,69,746	5,89,679	3,80,067	6 33	3 85	2 48	101
	1875	280 00	216 09	7 36	2,06,06,170	73,593	10,78,481	5,19,400	5,59,081	5 23	2 52	2 71	96
	1876	472 75	422 15	5 25	3,13,68,386	68,468	19,90,800	10,60,522	9,30,278	6 35	3 85	3 00	90
	1877	598 00	577 98	5 12	3,71,85,036	62,182	32,33,246	16,45,026	15,88,220	8 69	4 42	4 27	107
	1878	610 75	605 70	6 00	3,87,44,014	63,437	32,83,139	21,55,032	10,78,107	8 34	5 56	2 78	102
	1879	611 50	611 73	6 77	4,09,01,593	64,769	38,62,067	22,98,815	10,63,252	8 22	5 62	2 60	105
	1880	645 25	637 26	7 61	4,16,72,963	64,584	38,69,594	26,29,576	9,30,018	8 4	6 31	2 23	106
	1881	655 00	655 00	8 50	4,28,06,756	63,354	37,55,688	25,17,962	12,37,726	8 77	5 88	2 89	110
	1882	655 00	655 00	9 50	4,30,21,429	65,681	37,68,714	23,56,386	14,02,328	8 74	5 48	3 26	110
	1883	655 00	655 00	10 50	4,32,77,001	66,071	38,67,955	25,48,672	13,19,283	8 93	5 88	3 05	118
GREAT INDIAN PENINSULA RAILWAY													
	1855	20 60	14 40	0 71	-	-	89,634	41,144	48,490	-	-	-	119
	1854	33 25	20 06	1 31	-	-	1,38,220	84,045	54,175	-	-	-	88
	1855	49 60	37 35	1 63	-	-	1,76,560	1,23,971	52,589	-	-	-	89
	1856	87 25	73 70	1 77	-	-	4,33,602	1,82,862	2,50,740	-	-	-	113
	1857	87 25	77 25	2 77	-	-	7,25,215	3,28,272	3,96,943	-	-	-	158
	1858	193 60	113 57	1 83	-	-	11,24,249	4,74,278	6,49,971	-	-	-	173

Partly estimated

Partly estimated

STATEMENT showing the Mileage, Average Age, Cost and General Results of Working of all Indian Railways up to the Year 1880—continued

Y E A R	Miles Open at End of Year	Mean Mileage Open during Year	Mean Age of Lines at End of Year	Capital Outlay at Close of Year	Cost per Mile Open	Gross Earnings during Year	Working Expenses during Year	Net Profits of Year	Per centage on Capital Cost of			Gross Earnings per Mile per Week	R E M A R K S.	
									Gross Earnings	Working Expenses.	Net Profits			
GREAT INDIAN PENINSULA RAILWAY—contd.														
					Rs	Rs	Rs	Rs	Rs				Rs	
1859	244 25	203 23	2-28	-	-	18,28,528	9,35,971	8,92,557	-	-	-	-	172	
1860	297 00	286 29	2 84	-	-	21,43,571	13,06,892	8,36,679	-	-	-	-	144	
1861	437 75	370 16	2 78	-	-	26,78,873	20,45,332	6,33,541	-	-	-	-	139	
1862	495 00	451 40	3 37	-	-	34,95,590	21,68,018	13,27,572	-	-	-	-	149	
1863	555 00	532 37	3 96	-	-	48,24,152	32,58,999	15,65,253	-	-	-	-	175	
1864	587 50	561 14	4 70	-	-	69,61,996	50,17,777	19,44,219	-	-	-	-	119	
1865	703 75	603 72	4 76	-	-	1,29,56,625	77,14,871	52,41,754	-	-	-	-	414	
1866	817 75	736 16	5 12	-	-	1,36,97,164	79,53,901	57,43,353	-	-	-	-	357	
1867	954 60	848 21	6 86	-	-	1,62,16,683	90,32,796	71,85,687	-	-	-	-	368	* Excludes Mohpani Branch
1868	875 50	872 79	6 72	-	-	1,61,45,882	99,79,215	61,66,667	-	-	-	-	357	
1869	875 50	875 50	7 72	-	-	1,58,01,210	1,05,53,746	52,47,464	-	-	-	-	348	
1870	1,260 50	1,162 74	6 28	-	-	1,81,26,937	1,12,85,474	68,43,463	-	-	-	-	300	
1871	1,275 75	1,270 74	7-20	-	-	2,02,47,045	1,27,62,671	74,94,374	-	-	-	-	307	
1872	1,275 75	1,275 75	8 20	-	-	1,82,28,265	1,20,32,009	66,96,256	-	-	-	-	284	† Excluding Mohpani Branch
1873	1,275 75	1,275 75	9 20	23,62,39,190	1,85,176	1,88,51,120	1,20,81,127	67,69,993	7-98	5 11	2 87	284		
1874	1,275 75	1,275 75	10 20	23,67,57,570	1,85,583	2,01,65,973	1,19,32,583	82,33,390	8 54	5 04	3 48	303		
1875	1,275 75	1,275 75	11 20	23,80,65,870	1,86,608	2,15,24,577	1,01,75,853	1,13,48,718	9 04	4 27	4 77	324		
1876	1,275 75	1,275 75	12-20	23,97,99,600	1,87,967	2,46,35,413	1,16,77,891	1,28,57,532	10 23	4 87	5 36	369		
1877	1,275 75	1,275 75	13 20	24,15,85,669	1,89,367	3,27,74,151	1,58,28,683	1,69,45,468	13 57	6 56	7 01	422		
1878	1,275 75	1,275 75	14 20	24,63,02,172	1,93,064	3,83,64,811	1,38,73,563	1,44,91,248	11 51	5 63	5 88	499		
1879	1,275 75	1,275 75	15 20	24,85,83,445	1,94,833	2,52,48,315	1,50,57,714	1,01,90,601	10 16	6 06	4 10	383		
1880	1,275 75	1,275 75	16 20	24,99,77,200	1,95,945	2,49,53,253	1,88,47,702	1,11,05,551	9-98	5 54	4 44	372		
1881	1,288 00	1,288 00	19 04	25,10,85,907	1,94,942	3,20,56,823	1,58,87,335	1,62,19,488	12 76	6 31	6 45	483		
1882	1,288 00	1,288 00	18-04	25,22,49,649	1,95,846	3,44,62,531	1,63,12,697	1,91,49,834	13 66	6-46	7 20	519		
1883	1,288-00	1,288-00	19 04	25,35,00,000	1,96,816	3,45,00,892	1,71,08,242	1,73,92,650	13 61	6 75	6-86	515	Partly estimated	
BOMBAY, BARODA, AND CENTRAL INDIA RAILWAY.														
1860	35 00	26 00	0 74	-	-	66,349	46,559	19,790	-	-	-	-	49	
1861	134-00	06 51	10 98	-	-	4,06,854	2,29,639	1,83,215	-	-	-	-	73	
1862	167 25	144 93	1 66	-	-	7,06,723	3,54,370	3,52,353	-	-	-	-	94	
1863	185 00	184-03	2 40	-	-	13,73,392	6,79,869	6,93,423	-	-	-	-	138	
1864	305 75	196-25	2-05	-	-	15,95,503	13,61,402	2,34,101	-	-	-	-	166	
1865	305 75	305 75	3 05	-	-	35,62,142	22,73,827	12,88,314	-	-	-	-	223	

1866	-	-	-	305 75	305 75	4 06	-	-	-	44,47,505	31,98,915	12,48,590	-	-	-	-	278
1867	-	-	-	305 7 1/2	306 75	5 06	-	-	-	46,56,910	30,96,175	15,60,735	-	-	-	-	291
1868	-	-	-	306 75	305 75	6 04	-	-	-	45,78,698	33,72,675	12,06,023	-	-	-	-	287
1869	-	-	-	307 50	307 15	7 02	-	-	-	49,20,186	36,56,821	12,63,365	-	-	-	-	307
1870	-	-	-	812 50	312 41	7 91	-	-	-	53,79,250	32,56,664	21,22,586	-	-	-	-	327
1871	-	-	-	349 75	323 31	8 00	-	-	-	54,74,096	32,67,071	22,07,025	-	-	-	-	800
1872	-	-	-	389 25	373 67	8 15	-	-	-	46,49,316	33,87,667	22,61,449	-	-	-	-	290
1873	-	-	-	411 75	403 67	8 69	7,90,85,439	1,92,071	-	55,89,798	33,10,942	22,78,856	7 07	4 19	2 98	-	260
1874	-	-	-	428 50	424 06	9 34	8,10,04,047	1,89,041	-	58,58,414	30,63,218	28,08,196	7 23	3 77	3 46	-	265
1875	-	-	-	430 25	430 23	10 30	8,13,99,633	1,89,191	-	63,86,783	34,75,021	29,11,762	7 84	4 37	3 57	-	285
1876	-	-	-	439 23	439 89	11 07	8,14,56,207	1,85,467	-	67,72,282	37,07,006	30,65,286	8 31	4 55	3 76	-	296
1877	-	-	-	444 00	443 63	11 94	8,22,35,127	1,95,814	-	77,99,312	32,78,204	45,25,708	9 48	3 98	5 50	-	345
1878	-	-	-	444 00	444 00	12 94	8,22,31,760	1,85,207	-	69,04,950	32,09,550	36,95 400	8 40	3 91	4 49	-	298
1879	-	-	-	444 00	444 00	13 94	8,30,57,040	1,87,065	-	71,52,573	33,56,576	37,95,997	8 61	4 04	4 57	-	809
1880	-	-	-	444 00	444 00	14 94	2,28,42,480	1,86,582	-	82,44,375	35,08 452	47,35,923	9 95	4 23	5 72	-	355
1881	-	-	-	444 00	444 00	15 94	8,37,48,733	1,89,623	-	97,45,132	39,99 430	57,45,702	11 63	4 77	6 86	-	424
1882	-	-	-	460 50	457 97	16 43	8,47,31,902	1,83,999	-	1,01,76,189	51,65,317	50,10,878	12 09	6 09	6 00	-	428
1883	-	-	-	460 50	457 97	17 33	8,60,00,000	1,86,753	-	1,18,87,624	51,42,709	67,44,915	13 82	5 98	7 84	-	498

‡ Includes Patrl Branch

Partly estimated

CALCUTTA AND SOUTH EASTERN RAILWAY

1862	-	-	-	15 00	14 96	1 00	-	-	-	27,780	35 688	-7,888	-	-	-	-	36
1863	-	-	-	28 00	23 23	1 36	-	-	-	47,528	62,032	-14,704	-	-	-	-	38
1864	-	-	-	28 00	28 00	2 36	-	-	-	77,332	1,05,971	-88,639	-	-	-	-	53
1865	-	-	-	28 00	28 00	3 36	-	-	-	1,08,952	1,24,352	-15,600	-	-	-	-	75
1866	-	-	-	28 00	28 00	4 36	-	-	-	1,15,293	1,36,731	-21,438	-	-	-	-	79
1867	-	-	-	28 00	28 00	5 36	-	-	-	92,920	1,24,198	-31,278	-	-	-	-	64
1868	-	-	-	28 00	28 00	6 36	-	-	-	87,878	1,52,131	-64,258	-	-	-	-	60
1869	-	-	-	28 00	28 00	7 36	-	-	-	80,788	1,17,579	-36,798	-	-	-	-	58
1870	-	-	-	28 00	28 00	8 36	-	-	-	98,844	1,03,670	-4,826	-	-	-	-	55
1871	-	-	-	28 00	28 00	9 36	-	-	-	79,308	72,027	7,281	-	-	-	-	40
1872	-	-	-	28 00	28 00	10 36	-	-	-	58,711	54,057	4,654	-	-	-	-	40
1873	-	-	-	28 00	28 00	11 36	73,21,970	2,61,499	-	1,02,072	1,04,687	-2,615	1 39	1 43	-0 04	-	70
1874	-	-	-	28 00	28 00	12 36	73,08,800	2,61,499	-	99,489	77,946	21,544	1 36	1 07	0 29	-	68
1875	-	-	-	28 00	28 00	13 36	69,07,090	2,46,682	-	1,03,660	83,429	20,231	1 50	1 21	0 29	-	71
1876	-	-	-	28 00	28 00	14 36	69,01,150	2,46,470	-	98,343	1,06,824	-8,481	1 43	1 55	-0 12	-	68
1877	-	-	-	28 00	28 00	15 36	69,01,160	2,46,470	-	1,18,487	96,847	21,640	1 72	1 40	0 31	-	79
1878	-	-	-	28 00	28 00	16 36	69,01,160	2,46,470	-	1,25,694	94,372	31,322	1 82	1 37	0 45	-	83
1879	-	-	-	28 00	28 00	17 36	66,39,840	2,37,137	-	1,34,087	86,088	44,999	2 02	1 34	0 69	-	92
1880	-	-	-	28 00	28 00	18 36	66,39,843	2,37,137	-	1,42,096	1,01,344	40,754	2 14	1 53	0 61	-	98
1881	-	-	-	28 00	28 00	19 36	67,36,171	2,40,577	-	1,52,512	1,01,307	51,205	2 26	1 50	0 76	-	105
1882	-	-	-	43 00	31 13	13 38	5 67,20,634	2,40,023	-	2,10,079	2,04,650	5,429	3 12	3 04	0 08	-	119
1883	-	-	-	55 50	51 57	11 50	5 91,20,277	1,64,329	-	2,95,379	1,62,863	1,32,516	3 23	1 78	1 45	-	102

§ Cost of main line only 28 miles

|| Exclusive of branch line

¶ Including branch line.

STATEMENT showing the Mileage, Average Age, Cost and General Results of Working of all Indian Railways up to the Year 1880—continued.

Y E A R.	Miles Open at End of Year	Mean Mileage Open during Year	Mean Age of Locomotives at End of Year	Capital Outlay at Close of Year	Cost per Mile Open	Gross Earnings during Year	Working Expenses during Year	Net Profits of Year	Per-centago on Capital Cost of			Gross Earnings per Mile per Week.	R E M A R K S	
									Gross Earnings	Working Expenses.	Net Profits			
NALHATI STATE RAILWAY :														
1864	27 25	27 25	1 03	-	-	52,066*	25,460*	26,626*	-	-	-	-	-	
1865	27 25	27 25	2 08	-	-	57,507	35,393	21,115	-	-	-	-	-	
1866	27 25	27 25	3 03	-	-	52,102	54,787	-2,685	-	-	-	-	-	
1867	27 25	27 25	4 03	-	-	63,118	43,432	19,686	-	-	-	-	-	
1868	27 25	27 25	5 03	-	-	81,365	68,024	13,341	-	-	-	-	-	
1869	27 25	27 25	6 03	-	-	84,595	50,454	34,141	-	-	-	-	-	
1870	27 25	27 25	7 03	-	-	86,271	42,077	44,194	-	-	-	-	-	
1871	27 25	27 25	8 03	-	-	77,875	45,219	32,656	-	-	-	-	-	
1872	27 25	27 25	9 03	-	-	56,447	32,232	24,195	-	-	-	-	-	
1873	27 25	27 25	10 03	3,00,000	11,009	84,453	50,724	33,729	28 15	16 91	11 24	-	-	
1874	27 25	27 25	11 03	2,73,170	10,024	85,122	57,280	27,902	31 16	20 95	10 21	-	-	
1875	27 25	27 25	12 03	2,71,690	9,970	80,098	61,144	18,954	29 48	22 50	6 98	-	-	
1876	27 25	27 25	13 03	2,71,690	9,970	75,199	83,585	-3,386	27 68	30 76	-3 08	-	-	
1877	27 25	27 25	14 03	2,71,690	9,970	80,454	80,875	-421	32 92	33 08	-0 16	-	-	
1878	27 25	27 25	15 03	2,87,610	10,554	90,261	71,677	18,584	31 88	24 92	6 46	-	-	
1879	27 25	27 25	16 03	3,17,030	11,034	91,779	62,009	29,770	28 95	19 56	9 39	-	-	
1880	27 25	27 25	17 03	3,25,210	11,934	69,925	73,653	-3,728	21 50	22 65	-1 15	-	-	
1881	27 25	27 25	18 03	3,07,780	11,294	67,006	53,072	13,934	21 77	17 24	4 53	-	-	
1882	27 25	27 25	19 03	3,07,780	11,294	71,674	52,356	19,318	23 28	17 01	6 27	-	-	
1883	27 25	27 25	20 03	3,33,862	12,251	80,841	55,979	24,862	24 21	16 76	7 45	-	-	Estimated.
NORTHERN BENGAL RAILWAY .														
1877	134 25	46 34	0 34	1,28,04,740	95,558	48,717	68,347	-19,630	0 38	0 53	-0 15	-	-	
1878	232 50	210 12	1 10	1,68,95,580	77,149	87,471	6 80,642	2,56,829	5 25	3 73	1 52	-	-	
1879	243 50	238 94	2 03	1,76,12,060	76,248	12,52,311	11,51,317	1,00,994	7 11	6 54	0 63	-	-	
1880	243 50	243 50	3 03	1,96,73,726	80,796	14,49,296	8,54,386	5,94,910	7 30	4 34	3 02	-	-	
1881	260 50	252 44	3 77	2,03,70,182	78,269	18,43,889	9,44,574	8,99,315	9 04	4 63	4 41	-	-	
1882	274 25	272 89	4 60	2,05,17,179	74,811	21,46,010	10,52,357	10,93,553	10 46	5 13	5 33	-	-	
1883	289 00	279 16	5 33	2,20,47,730	76,289	22 94,101	11,28,821	11,65,370	10 40	5 11	5 29	-	-	
TIRHOOT RAILWAY .														
1875	43 00	7 19	0 16	16 64,126	38,723	14,330	15,960	-1,130	0 89	0 96	-0 07	-	-	
1876	43 00	43 00	1 16	23,33 401	54,265	1,79,414	1,23,196	56,218	7 69	5 28	2 41	-	-	
1877	78 00	70 69	1 55	44,48,248	57,029	2,83,922	1,93,620	90,302	6 88	4 35	2 53	-	-	

61

1878	-	-	-	78 00	78 17	2 51	48 87 801	62 664	4 41,308	3,32 500	1 08,808	9 03	6 80	2 23	108
1879	-	-	-	85 00	78 00	3 55	49 99,046	58,813	4 58 738	3 59 914	1,07,819	9 18	7 02	2 16	113
1880	-	-	-	85 00	85 00	4 55	51,51,330	62,821	4,52,924	2,62,189	1,90,725	8 79	5 09	3 70	102
1881	-	-	-	85 00	85 00	5 55	56 52,425	66,499	5,84,254	3,48,054	2,36,200	10 33	6 16	4 17	132
1882	-	-	-	98 50	85 50	6 55	64,47,495	72,855	6,60,021	4,05 975	2,54,046	10 23	6 29	3 94	143
1883	-	-	-	193 00	154 84	3 68	1,32,86,524	68,842	8,81,372	6,30,448	2,60,929	6 63	4 67	1 96	88

Estimated.

PATNA AND GYA RAILWAY

1879	-	-	-	57 00	36 49	0 84	28 45,078	49,914	2,30 510	1,28,723	1,01,787	8 10	4 52	3 58	121
1880	-	-	-	57 00	57 00	1 16	32,20,951	56,508	4 81,656	2,70,300	2 11,256	14 05	8 39	6 56	162
1881	-	-	-	57 20	57 00	2 64	35,04,401	61,265	5,13,431	3,34,286	1,79,145	14 65	9 54	5 11	172
1882	-	-	-	57 20	57 25	3 04	37,97,742	66,394	5,46,164	3,30,459	2,15,705	14 38	8 70	5 68	183

MUTTRA-HATHRAS RAILWAY

1875	-	-	-	29 00	5 88	0 20	9,55,863	32,961	83,151	19,287	13,864	3 47	2 02	1 45	108
1876	-	-	-	29 00	29 00	1 20	9,21,560	31,778	88 406	48 159	35,247	9 05	5 23	3 82	55
1877	-	-	-	29 00	29 00	2 20	9,91,590	34,193	98,900	53,689	45,211	9 98	5 42	4 56	66
1878	-	-	-	29 00	29 00	3 20	9 93,600	34,262	98,308	52,431	45,877	9 89	5 27	4 62	65
1879	-	-	-	29 00	29 00	4 20	10,34 720	35,680	1,25 930	69,222	56,708	12 17	6 69	5 48	83
1880	-	-	-	29 00	29 00	5 20	10,88,160	37,523	1,35,226	77,556	57 670	12 43	7 13	5 30	89
1881	-	-	-	29 00	29 00	6 20	10,50,861	36,240	1,35,335	93,632	41,709	12 88	8 91	3 97	89
1882	-	-	-	29 00	29 00	7 20	10,47,748	36,129	1,26,579	97,278	29,101	12 06	9 28	2 78	84

CAWNPORE-FARAKHABAD RAILWAY

1880	-	-	-	49 25	2 29	0 05	27,08,089	54,987	2,202	5,134	—2,932	0 08	0 19	—0 11	18
1881	-	-	-	86 50	82 87	0 99	31,20,855	36 148	2,78,585	1,94,347	84,238	8 90	6 21	2 69	62
1882	-	-	-	86 50	86 50	1 99	31,31,013	36,196	3,58,811	2,41,702	1,17,109	11 46	7 72	3 74	80

DILDARNAGAR-GHAZIPUR RAILWAY

1880	-	-	-	12 00	2 89	0 24	5,63,297	46,941	8,351	10,717	—3,366	1 48	1 90	—0 42	56
1881	-	-	-	12 00	12 00	1 24	5,92,433	49,369	39,039	38,843	189	6 59	6 66	0 03	62
1882	-	-	-	12 00	12 00	2 24	6,24,104	52,009	45,866	38,577	6,879	7 25	6 18	1 07	72
1883	-	-	-	12 00	12 00	3 24	7,25,769	60,480	50,710	30,996	19,714	6 98	4 27	2 71	82

Estimated.

RAJPUTANA RAILWAY

1873	-	-	-	91 75	64 47	0 70	-	-	1,08,717	1,05,011	3,706	-	-	-	32
1874	-	-	-	291 75	171 30	0 80	1,32,70,892	45,488	6,18,314	4,96 548	1,31,766	4 66	3 74	0 92	69
1875	-	-	-	378 75	844 36	1 53	2,12 68 680	56,141	17,46,960	11,18,692	6,28,288	8 22	5 26	2 96	98
1876	-	-	-	399 00	393 90	2 44	2,38,46,230	60,016	23,29 592	15 23,623	8,05 969	9 77	6 39	3 38	114
1877	-	-	-	399 00	399 00	3 44	2 53,82 400	63,615	26,96,687	18,33,367	8,63,120	10 62	7 22	3 40	130
1878	-	-	-	431 25	419 41	4 16	2,83,46,980	66,128	29,72,601	18,42,130	11,30,471	10 49	6 50	3 90	136

Including Holkar and Sind-Nemach Railways and Western Rajputana Railway

STATEMENT showing the Mileage, Average Age, Cost and General Results of Working of all Indian Railways up to the Year 1880—continued

Y E A R .	Miles Open at End of Year	Mean Mileage Open during Year	Mean Age of Lanes at End of Year	Capital Outlay at Close of Year	Cost per Mile Open	Gross Earnings during Year	Working Expenses during Year	Net Profits of Year	Per-centage on Capital			Gross Earnings per Mile per Week.	REMARKS
									Gross Earnings.	Working Expenses.	Net Profits		
RAJPUTANA RAILWAY—continued				<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs.</i>				<i>Rs</i>	
1879	466 50	498 47	4 80	3,09,48,568	66,474	35,45,420	23,66,263	11,79,167	11 46	7 65	8 81	153	
1880	489 50	470 80	5 52	3,40,61,947	69,685	37,23,719	24,90,414	12,33,805	10 93	7 31	3 62	152	
1881	826 57	826 57	5 57	5,20,44,976	62,989	72,42,246	43,76,206	28,67 040	13 91	8 40	5 81	168	
1882	1,116 56	1,116 55	4 86	8,74,13,893	78,359	1,09,29,690	58,00,377	51,29,353	12 50	6 63	5 87	188	
1883	1,205 25	1,175 99	5 42	9,56,10,554	79,245	1,26,92,851	66,24,194	60,68,657	13 28	6 93	6 35	200	Estimated.
HOLKAR AND SINDIA-NEEMUCH RAILWAY:													
1874	37 00	33 21	0 90	15,80,158	42,707	1,03,364	86,844	16,520	6 54	5 50	1 04	60	
1875	37 25	56 20	1 56	48,74,540	85,147	5,59,320	3,29,524	29,796	7 87	6 78	0 61	123	
1876	107 50	78 04	1 56	1,07,87,850	1,00,353	4,01,101	3,72,490	28,611	3 72	3 45	0 27	99	
1877	107 50	107 50	2 56	1,14,38,860	1,06,408	4,80,128	3,69,047	1,11,081	4 19	3 22	0 97	86	
1878	171 75	146 24	2 45	1,96,98,320	1,14,109	9,29,045	6,27,128	3,01,917	4 74	3 20	1 54	122	
1879	171 75	171 75	3 45	2,00,13,727	1,16,528	11,46,837	8,54,009	2,91,828	5 72	4 27	1 45	128	
1880	254 50	227 71	3 22	2,53,37,858	99,559	14,01,259	10,47,268	3,53,991	5 33	4 13	1 40	118	
1881	289 23	282 30	4 24	3,16,69,537	1,09,500	19,49,579	13,47,280	6,02,299	6 15	4 25	1 90	129	
1882	Amalgamated with Rajputana line												Holkar and Sindia-Neemuch lines was amalgamated with Rajputana State lines.
1883													
PATRI BRANCH													
1873													
1874													
1875													
1876													
1877													
1878													
				Worked by Bombay, Baroda and Central India Railway									
1879													
1880													
1881													
1882													
DEHOND-MANMAD													
1878	145 75	108 03	0 74	71,17,400	48,863	1,35,254	1,77,195	-41,941	1 90	2 49	-0 69	24	
1879	145 75	145 75	1 74	96,43,500	65,478	4,67,537	4,95,222	-27,685	4 90	5 19	-0 29	63	
1880	145 75	145 75	2 74	1,04,53,463	71,756	6,96,094	6,06,375	88,219	6 65	5 80	0 85	91	
1881	145 75	145 75	3 74	99,49,395	68,263	3,62,398	2,37,841	1,22,557	31 61	2 39	1 23	47	
1882	145 75	145 75	4 74	99,25,269	68,806	7,39,558	5,80,366	1,59,192	7 45	5 85	1 60	98	
1883	145 75	145 75	5 75	1,00,54,757	69,055	8,23,633	6,30,694	1,94,139	8 17	6 28	1 89	108	Worked by the Great India Peninsula Railway

WARDHA COAL RAILWAY.

0 61.	1874	-	-	18 50	16 48	0 91	12,57,898	67,994	21,023	22,064	-1,041	16 71	17 54	-0 83	28
	1875	-	-	18 50	18 50	1 91	12,67,370	68,501	29,716	31,274	-1,558	2 31	2 46	-0 16	41
	1876	-	-	18 50	18 50	2 91	12,66,162	68,440	21,536	26,516	-8,700	1 72	2 02	-0 30	23
	1877	-	-	46 50	23 70	1 66	45,99,370	98,911	79,087	55,565	23,532	1 72	1 21	0 51	67
	1878	-	-	46 50	46 50	2 66	47,73,896	1,02,660	1,30,399	1,22,372	8,027	2 73	2 56	0 17	54
	1879	-	-	46 50	46 50	3 66	47,99,450	1,08,214	1,65,168	1,34,833	30,326	3 44	2 81	0 63	69
	1880	-	-	46 50	46 50	4 66	56,15,804	1,20,269	1,55,900	2,38,376	-82,476	2 78	4 26	-1 47	65
	1881	-	-	45 00	45 00	5 66	50,02,023	1,11,156	1,49,277	1,52,263	66,986	4 30	2 98	1 32	92
	1882	-	-	45 00	45 00	6 66	51,62,669	1,14,726	2,61,923	1,93,480	68,443	4 88	3 76	1 13	107
	1883	-	-	45 00	45 00	7 66	63,93,756	1,42,083	2,94,588	1,76,076	1,18,522	4 60	2 75	1 85	216

Estimated

NAGPUR AND CHHATTISGARH RAILWAY.

1880	-	-	53 00	39 21	0 74	30,37,689	57,315	1,08,953	82,681	21,271	3 42	2 73	0 70	51
1881	-	-	98 00	76 84	1 32	56,88,159	67,991	2,81,529	2,15,473	66,056	4 95	3 79	1 16	55
1882	-	-	149 00	100 23	1 68	87,96,174	59,028	6,04,387	4,15,216	1,89,171	6 87	4 72	2 15	78
1883	-	-	149 00	100 00	2 68	96,33,891	64,656	13,19,308	6,36,248	6,83,665	13 70	6 60	7 10	170

RANGOON AND IRRAWADDY VALLEY RAILWAY

5 1 4	1877	-	-	161 00	108 07	0 67	88,39,650	54,905	3,44,452	4,45,584	-1,01,132	3 90	5 04	-1 14	61
	1878	-	-	161 00	161 00	1 67	1,12,12,847	69,646	8,96,812	67,167	8 59	7 99	0 60	115	
	1879	-	-	161 00	161 00	2 67	1,18,94,894	78,881	9,55,918	8,14,175	1,41,743	8 04	6 85	1 19	114
	1880	-	-	161 00	161 00	3 67	1,23,07,244	76,448	13,22,710	8,01,626	5,21,084	10 74	6 51	4 23	158
	1881	-	-	161 00	161 00	4 67	1,24,92,079	77,690	15,43,622	8,98,544	6,45,078	12 35	7 19	5 16	184
	1882	-	-	161 00	161 00	5 67	1,26,82,769	78,775	16,75,690	9,45,260	6,30,430	12 42	7 45	4 97	188
	1883	-	-	161 00	161 00	6 67	1,31,87,905	81,912	16,62,886	10,10,520	5,52,366	11 85	7 66	4 19	186

SINDIA RAILWAY

1878	-	-	94 00	83 16	0 95	42,42,416	1,24,777	93,911	1,25,186	-31,275	2 21	2 95	-0 74	54
1879	-	-	66 50	44 68	1 15	79,20,207	1,10,078	90,916	1,22,688	-31,776	1 24	1 68	-0 44	89
1880	-	-	66 50	66 50	2 16	81,61,909	1,22,565	2,01,824	1,77,714	24,110	2 48	2 18	0 30	58
1881	-	-	74 75	71 45	2 87	85,86,577	—	1,14,870	—	—	—	—	—	—
1882	-	-	74 75	71 45	3 87	87,35,891	1,16,868	8,39,399	2,37,068	92,381	3 77	2 71	1 06	86

PUNJAB NORTHERN RAILWAY

1875	-	-	62 00	44 84	0 72	54,06,934	87,219	1,42,788	90,543	52,945	2 64	1 68	0 96	61
1876	-	-	103 25	90 98	1 31	1,79,57,898	1,73,926	4,75,946	3,67,778	1,08,168	2 65	2 05	0 60	101
1877	-	-	103 25	103 25	2 31	1,70,25,460	1,64,895	6,96,761	6,04,879	91,882	4 09	3 55	0 54	130
1878	-	-	103 25	103 25	3 31	1,73,40,018	1,67,942	9,09,571	9,09,761	6,810	5 24	5 21	0 03	196
1879	-	-	103 25	103 25	4 31	2,44,38,332	2,37,228	15,50,081	14,71,162	3,78,919	7 55	6 01	1 54	345
1880	-	-	224 75	179 17	5 30	4,04,37,319	1,78,138	33,68,284	28,04,113	5,64,171	8 33	6 98	1 40	360
1881	-	-	342 00	311 91	2 85	5,47,91,396	1,68,514	31,09,612	31,09,612	3,59,598	6 84	5 68	0 66	189
1882	-	-	395 50	369 63	3 85	6,10,71,973	1,54,417	31,48,168	26,21,495	5,09,017	5 12	4 29	0 53	146
1883	-	-	420 00	413 71	4 84	7,29,50,216	1,73,690	—	26,26,637	6,17,526	4 30	3 46	0 64	144

STATEMENT showing the Mileage, Average Age, Cost and General Results of Working of all Indian Railways up to the Year 1880—continued.

Y E A R	Miles Open at End of Year	Mean Mileage Open during Year	Mean Age of Lines at End of Year	Capital Outlay at Close of Year	Cost per Mile Open.	Gross Earnings during Year	Working Expenses during Year	Net Profits of Year	Per-centage on Capital Cost of			Gross Earnings per Mile per Week	R E M A R K S	
									Gross Earnings	Working Expenses.	Net Profits			
INDUS VALLEY AND KANDAHAR RAILWAYS.														
				<i>Rs.</i>		<i>Rs.</i>		<i>Rs.</i>		<i>Rs.</i>				
1878	- - - -	501 00	188 57	0 37	5,12,48,691	1,02,293	5,72,109	7,03,550	-1,81,441	1 12	1 38	-9 28	56	
1879	- - - -	501 00	501 00	1 37	5,70,95,291	1,13,963	31,96,316	25,69,418	5,26,898	5 60	4 50	1 10	121	
1880	- - - -	658 00	594 18	1 96	6,92,82,608	1,06,099	64,72,659	45,38,397	19,34,262	9 34	6 55	2 79	209	
1881	- - - -	658 10	658 10	2 96	7,44,77,194	1,14,036	55,36,161	48,57,873	11,77,288	7 48	5 85	1 58	168	
1882	- - - -	658 10	658 10	3 96	7,84,56,114	1,20,129	51,12,560	35,36,447	15,76,113	6 57	4 50	2 01	160	
1883	- - - -	658 00	658 00	4 96	8,39,19,956	1,28,505	72,41,174	40,22,541	32,18,633	8 63	4 79	3 84	213	Estimated
WESTERN RAJPUTANA RAILWAY.														
1879	- - - -	82 63	10 50	0 13	-	-	47,810	41,056	6,754	- -	- -	- -	86	
1880	- - - -	82 63	82 63	1 13	63,17,355	76,452	6,50,103	5,57,724	92,379	10 29	8 83	1 46	151	
1881	- - - -	Amalgamated with Rajputana Railway			-	-	-	-	-	-	-	-	-	
1882	- - - -	-	-	-	-	-	-	-	-	-	-	-	-	
GAEKWAR OF BARODA'S RAILWAY.														
1873	- - - -	20 00	14 68	0 73	-	-	15,758	15,497	261	- -	- -	- -	21	
1874	- - - -	20 00	20 00	1 73	* 4,00,000	20,000	39,087	25,074	8,013	8 27	6 27	2 00	82	
1875	- - - -	20 00	20 00	2 73	* 4,00,000	20,000	34,302	26,995	7,307	8 57	6 74	1 83	33	* Approximate.
1876	- - - -	20 00	20 00	3 73	* 4,00,000	20,000	39,775	29,971	9,805	9 94	7 49	2 45	38	
1877	- - - -	20 00	20 00	4 73	3,82,500	19,125	46,400	36,285	10,115	12 13	9 49	2 64	45	
1878	- - - -	20 00	20 00	5 73	3,82,500	19,125	44,891	36,022	16,869	11 74	7 33	4 41	43	
1879	- - - -	40 25	30 65	3 61	6,67,687	16,588	72,083	40,474	31,609	10 80	6 07	4 73	46	
1880	- - - -	57 75	49 07	3 37	11,44,210	19,813	1,28,824	63,687	65,137	11 26	5 57	5 69	51	
1881	- - - -	† 58 83	50 57	5 15	12,34,622	20,920	1,41,233	92,384	48,849	11 44	7 49	3 95	46	† Taken from the Revenue Account.
1882	- - - -	58 83	58 83	7 15	12,47,730	21,144	1,44,022	97,275	46,747	11 54	7 79	3 75	47	
KHANGAON RAILWAY.														
1870	- - - -	8 00	6 64	0 83	-	-	10,713	19,957	- 9,244	- -	- -	- -	31	Opened for traffic on 4th March 1870
1871	- - - -	8 00	8 00	1 83	-	-	23,906	20,718	3,188	- -	- -	- -	56	
1872	- - - -	8 00	8 00	2 83	-	-	12,910	8,989	3,921	- -	- -	- -	31	
1873	- - - -	8 00	8 00	3 83	4,85,054	60,632	18,147	16,094	2,053	3 74	3 32	0 42	81	
1874	- - - -	8 00	8 00	4 83	4,80,054	60 632	28,517	15,011	13,506	5 88	3 09	2 79	127	
1875	- - - -	8 00	8 00	5 83	4,44,630	55,579	40,318	37,540	12,678	9 07	6 22	2 85	174	

1876	8:00	8:00	6 83	4,44,630	55,579	32,274	23,376	8,898	7 28	5 26	2 00	182	
1877	8:00	8:00	7 83	4,85,054	60,632	50,990	81,473	19,617	10 61	6 49	4 02	154	
1878	8:00	8:00	8 83	4,71,140	58,992	52,991	21,539	31,453	11 25	4 67	6 68	191	
1879	8:00	8:00	9 83	5,27,728	65,416	58,086	38,350	—264	7 28	7 33	—0 65	146	
1880	8:00	8:00	10 83	5,08,187	63,523	27,868	23,106	4,257	13 38	4 56	0 83	98	
1881	8:00	8:00	11 83	4,82,570	60,321	41,506	80,975	10,531	8 60	6 42	2 18	99	Worked by the Great Indian Peninsula Railway
1882	8:00	8:00	12 83	4,82,570	60,321	75,966	45,577	30,389	15 74	9 44	6 30	109	Estimated.
1883	8:00	8:00	18 83	4,90,996	61,874	62,657	39,990	22,667	12 76	8 14	4 62	150	
AMRAOTI RAILWAY													
1871	6:00	5 24	0 87	-	-	19,085	18,956	5,129	-	-	-	70	
1872	6:00	6:00	1 87	-	-	23,025	20,358	2,757	-	-	-	74	Opened for traffic on 6th February 1871
1873	6:00	6:00	2 87	4,37,278	72,380	24,124	27,745	—8,621	5 52	6 34	—0 83	77	
1874	6:00	6:00	3 87	4,87,278	72,880	31,615	30,494	1,181	7 23	6 96	0 27	101	
1875	6:00	6:00	4 87	4,00,840	66,807	58,106	45,089	18,067	14 49	11 28	3 26	186	
1876	6:00	6:00	5 87	4,37,278	72,880	69,166	48,863	20,303	16 82	11 17	4 65	213	
1877	6:00	6:00	6 87	4,37,278	72,880	80,092	27,383	52,709	18 31	6 28	12 06	267	
1878	6:00	6:00	7 87	4,25,848	70,975	83,124	38,980	50,144	20 92	9 15	11 77	286	
1879	6:00	6:00	8 87	4,65,695	77,617	69,904	53,728	16,176	16 01	11 54	8 47	324	
1880	6:00	6:00	9 87	4,84,261	72,377	50,865	47,226	3,639	11 71	10 87	0 84	163	
1881	6:00	6:00	10 87	4,34,338	72,389	53,985	42,334	11,651	12 41	9 74	2 67	172	
1882	6:00	6:00	11 87	4,34,338	72,389	65,147	45,611	39,535	19 60	10 50	9 10	272	Worked by the Great Indian Peninsula Railway
1883	6:00	6:00	12 87	4,44,860	74,143	96,159	49,773	46,386	21 61	11 18	10 43	308	
NIZAM'S RAILWAY.													
1874	121 00	27 85	0 23	99,92,120	82,084	1,15,290	1,09,482	5,748	1 16	1 10	0 06	79	
1875	121 00	121 00	1 23	1,03,75,760	85,750	4,96,519	5,63,304	—67,385	4 79	5 44	—0 65	79	
1876	121 00	121 00	2 23	1,06,23,010	87,798	5,61,738	4,98,674	63,064	5 48	4 69	0 79	92	
1877	121 00	121 00	3 23	1,15,06,385	95,094	8,30,788	6,44,081	1,86,687	7 22	5 60	1 32	192	
1878	121 00	121 00	4 23	1,14,59,384	94,705	7,91,753	6,79,507	1,11,646	6 51	6 39	0 98	126	
1879	121 00	121 00	5 23	1,16,10,466	95,954	6,94,401	6,04,476	89,925	5 98	6 21	0 77	110	
1880	121 00	121 00	6 23	1,20,62,228	99,688	7,02,716	4,78,407	2,24,309	5 83	3 37	1 86	112	
1881	117 10	117 10	7 23	1,21,75,473	1,09,975	7,56,834	4,64,059	2,92,775	\$ 6 21	\$ 3 81	\$ 2 40	121	
1882	117 10	117 10	8 23	1,21,86,480	1,04,067	8,59,418	4,84,319	3,76,039	7 05	3 97	3 08	137	
1883	117 10	117 10	9 23	1,22,88,559	1,04,898	8,58,520	6,15,688	2,37,982	6 34	5 01	1 38	141	‡ The length of line actually constructed is 117 10 miles, the additional 3 34 miles represents the distance run over twice by each train. § Worked out upon 120 44 miles. Estimated

Calcutta,
24 March 1884.

EXPORTS of INDIAN WHEAT from each PROVINCE in BRITISH INDIA from 1866-67 (11 Months) to 1882-83.

YEARS.	BENGAL.		BOMBAY.		SINDE.		MADRAS.		BRITISH RUMMA		TOTAL.	
	Quantity	Value	Quantity	Value	Quantity.	Value.	Quantity.	Value	Quantity	Value	Quantity	Value.
	<i>Cwt</i>	<i>Rs</i>	<i>Cwt</i>	<i>Rs.</i>	<i>Cwt.</i>	<i>Rs</i>	<i>Cwt.</i>	<i>Rs.</i>	<i>Cwt</i>	<i>Rs</i>	<i>Cwt.</i>	<i>Rs.</i>
1866-67 (11 Months)	-	2,89,524	-	2,29,365	-	2,59,367	-	35,783	-	4,920	-	7,68,959
1867-68	281,737	6,60,974	18,768	1,29,392	36,157	1,56,576	12,733	66,136	-	-	299,385	10,18,082
1868-69	184,614	5,62,401	34,134	1,82,167	36,872	1,55,076	19,280	84,212	1,981	3,741	275,481	9,87,597
1869-70	57,005	2,27,811	7,633	89,244	768	3,193	9,999	49,150	2,803	9,843	79,208	3,29,241
1870-71	205,139	8,12,951	33,351	1,73,887	7,328	35,506	2,514	15,159	196	827	248,522	10,88,330
1871-72	346,979	10,22,234	127,945	6,69,009	152,359	6,15,713	3,336	18,558	5,960	86,837	637,098	23,56,445
1872-73	145,005	4,90,881	74,856	3,93,561	168,005	7,62,845	6,144	29,663	-	-	394,010	16,76,900
1873-74	513,875	18,93,887	434,459	24,54,147	797,647	33,73,156	9,388	51,654	590	3,220	1,755,954	82,76,064
1874-75	390,530	11,89,030	633,681	30,44,829	143,144	6,15,780	9,186	45,084	2,535	9,929	1,669,076	49,04,352
1875-76	1,380,951	39,90,097	837,869	36,59,808	306,063	12,94,687	7,492	32,496	15,819	83,171	2,492,185	90,10,255
1876-77	3,587,646	1,23,51,150	1,294,094	52,83,538	455,240	19,54,159	4,469	21,240	1,687	4,153	5,583,336	1,95,63,325
1877-78	4,548,033	1,91,20,671	1,159,443	60,20,276	607,470	23,21,098	25,673	1,01,032	1,503	6,777	6,340,150	2,35,69,899
1878-79	890,079	42,17,414	130,001	7,76,680	22,337	1,28,633	2,272	15,008	-	-	1,044,709	51,37,785
1879-80	1,586,473	76,59,761	333,189	20,08,900	274,764	15,34,624	1,080	6,273	94	590	2,195,550	1,12,10,148
1880-81	3,937,871	1,51,38,212	3,315,070	1,37,63,473	189,465	8,37,569	1,969	10,137	-	-	7,444,373	3,27,79,416
1881-82	6,668,047	2,52,07,566	11,328,585	5,13,03,583	1,852,334	94,82,433	10,996	36,173	3,558	11,055	19,863,520	8,60,40,315
1882-83	4,439,403	1,79,35,557	6,937,752	3,98,94,916	2,732,275	1,28,12,379	6,592	22,233	8,375	23,257	14,144,407	6,06,89,341

1906 QUANTITIES and VALUE of "COTTON PIECE-GOODS" Imported from FOREIGN PORTS into each PROVINCE of BRITISH INDIA from 1866-67 (11 Months) to 1882-83

YEARS	BENGAL.		BOMBAY		SINDH		MADRAS.		BRITISH BURMA.		TOTAL.	
	Quantity	Value.	Quantity	Value.	Quantity	Value.	Quantity	Value.	Quantity	Value.	Quantity	Value.
	<i>Yds and No</i>	<i>Rs</i>	<i>Yds and No</i>	<i>Rs.</i>	<i>Yds and No.</i>	<i>Rs</i>	<i>Yds and No</i>	<i>Rs</i>	<i>Yds and No</i>	<i>Rs</i>	<i>Yds and No</i>	<i>Rs</i>
1866-67 (11 Months)	•	6,76,85,603	•	4,86,85,701	•	9,85,124	•	65,23,860	•	14,11,680	•	12,53,41,060
1867-68	•	8,66,47,078	•	5,29,02,240	•	12,25,448	•	72,05,824	•	20,21,569	•	14,96,99,174
1868-69	•	9,15,81,618	•	5,48,93,539	•	20,72,039	•	82,20,938	•	39,77,376	•	16,07,25,505
1869-70	•	7,65,47,300	•	4,64,47,664	•	15,47,143	•	85,98,750	•	24,47,605	•	13,55,58,463
1870-71	•	10,00,58,571	•	4,11,49,540	•	11,53,801	•	1,10,32,621	•	30,59,142	•	15,64,48,675
1871-72	•	9,32,58,276	•	4,06,76,808	•	14,30,217	•	1,08,45,939	•	38,68,505	•	16,00,99,808
1872-73	•	8,92,39,502	•	4,02,77,549	•	11,42,199	•	1,04,16,664	•	43,81,808	•	14,54,57,723
1873-74	•	8,61,24,015	•	4,76,76,135	•	7,60,319	•	1,19,08,082	•	44,13,257	•	15,10,81,809
1874-75	•	10,35,94,043	•	4,25,58,014	•	5,27,303	•	1,02,19,627	•	51,68,515	•	16,21,77,602
1875-76	Yds. 778,094,522	10,23,81,834	322,044,190	4,62,45,868	5,575,318	4,58,950	67,002,848	1,06,51,710	15,624,559	28,56,258	1,186,141,537	16,25,94,515
	No 8,433,936		3,708,036		-		116,717		311,223		7,469,911	
1876-77	Yds 733,882,901	9,26,55,843	348,651,554	4,85,93,104	2,732,995	3,99,770	67,394,432	1,06,44,658	33,826,928	60,45,580	1,186,418,810	15,82,04,045
	No 1,482,655		4,949,328		468		120,984		951,595		7,205,090	
1877-78	Yds 980,841,265	11,32,26,856	344,924,431	4,48,49,286	2,675,955	3,47,088	55,744,346	84,87,756	24,674,873	41,76,765	1,358,860,871	17,10,27,751
	No 3,156,934		5,944,825		12		180,006		9,923,251			
1878-79	Yds 719,400,180	8,47,97,732	319,195,001	4,07,73,943	1,656,582	2,13,875	55,958,357	82,20,955	31,521,473	53,08,605	1,197,731,573	13,69,75,110
	No 2,611,831		4,746,987		-		169,084		873,510		8,300,612	
1879-80	Yds 846,949,582	10,24,05,701	382,046,320	4,86,59,906	3,130,490	3,78,904	70,185,987	1,03,17,347	31,719,649	54,71,664	1,333,740,988	16,72,33,522
	No 2,729,594		5,211,756		-		74,864		2,037,208		10,053,422	
1880-81	Yds 1,071,528,681	13,11,97,658	561,024,911	7,30,22,608	6,425,443	6,84,125	87,063,023	1,32,67,997	46,130,679	80,04,028	1,774,227,710	23,63,86,418
	No 4,301,714		11,701,306		34,070		470,995		931,280		17,339,415	
1881-82	Yds 942,561,555	11,33,41,841	533,949,416	7,02,18,838	16,166,132	21,60,564	90,721,162	1,45,55,965	33,839,518	54,50,031	1,623,220,783	20,57,07,339
	No 1,633,039		6,174,025		11,525		96,038		8,767,877		8,767,877	
1882-83	Yds 928,948,180	11,23,29,120	539,367,522	7,19,49,765	14,993,645	20,51,018	113,517,010	1,76,47,509	44,578,360	78,40,251	1,640,805,008	21,18,17,652
	No 3,216,931		9,994,168		302,914		313,111		3,078,045		15,908,219	
TOTAL	Yds 6,949,601,887	1,64,70,67,684	3,362,763,655	85,98,55,658	51,363,581	1,76,74,877	613,517,145	1,78,65,191	263,909,092	7,59,82,764	11,231,157,280	2,77,92,36,164
No 21,354,934	52,129,581		348,889		1,642,399		9,626,984		84,901,737			

* Quantities in various denominations, such as yards, pairs, pieces, dozens, and also in some cases no quantities are shown.

† Quantity defective

N.B.—The denomination of Number denotes for "Handkerchiefs and Shawls in the piece"

QUANTITIES and VALUE of "IRON" IMPORTED from FOREIGN PORTS into the several PROVINCES of BRITISH INDIA from 1866-67 (11 Months) to 1882-83

YEARS.	BENGAL		BOMBAY		SINDH		MADRAS		BRITISH BURMA		TOTAL	
	Quantity	Value	Quantity	Value.	Quantity.	Value	Quantity.	Value	Quantity.	Value.	Quantity.	Value.
1866-67 (11 Months)	<i>Cwt</i>	<i>Rs</i>	<i>Cwt</i>	<i>Rs</i>	<i>Cwt.</i>	<i>Rs</i>	<i>Cwt</i>	<i>Rs.</i>	<i>Cwt</i>	<i>Rs</i>	<i>Cwt.</i>	<i>Rs.</i>
1866-67 (11 Months)	*	26,25,408	*	38,50,279	*	1,21,200	*	9,28,209	*	3,43,788	*	78,48,879
1867-68	*	52,62,333	*	65,98,783	*	10,67,225	*	11,67,037	*	5,17,626	*	1,46,13,004
1868-69	*	57,41,767	*	58,95,597	*	10,59,324	*	13,48,161	*	4,72,807	*	1,45,17,558
1869-70	*	46,14,980	*	49,77,769	*	5,04,335	*	14,23,484	*	3,60,317	*	1,18,80,865
1870-71	*	35,19,530	*	32,88,198	*	1,54,805	*	8,39,576	*	2,01,849	*	79,98,958
1871-72	*	87,06,966	*	34,34,291	*	87,062	*	7,22,297	*	2,73,464	*	82,24,020
1872-73	*	36,71,773	*	26,18,547	*	1,52,166	*	6,62,103	*	3,66,843	*	74,71,432
1873-74	*	30,61,463	*	29,30,417	*	41,422	*	6,31,105	*	5,14,417	*	77,78,924
1874-75	*	55,48,525	*	48,50,924	*	2,11,304	*	7,67,007	*	8,84,924	*	1,22,63,244
1875-76	733,857	51,45,977	913,106	65,84,072	26,363	2,10,176	299,399	19,45,073	48,631	3,59,780	2,028,346	1,42,45,978
1876-77	933,057	63,35,553	922,799	62,95,462	41,309	3,10,391	243,889	15,10,610	110,139	8,32,041	2,251,193	1,52,84,057
1877-78	1,022,354	60,32,433	1,041,780	59,31,135	23,567	1,91,191	272,632	15,80,007	77,088	6,30,845	2,437,721	1,43,55,611
1878-79	1,002,552	63,06,326	1,040,281	61,01,932	105,130	6,94,837	127,465	7,25,084	89,378	6,21,922	2,365,306	1,44,60,151
1879-80	1,053,325	60,90,692	617,982	37,16,879	86,265	4,87,414	236,449	12,31,073	118,106	7,67,989	2,111,127	1,32,32,747
1880-81	1,043,394	60,80,207	998,452	58,26,633	132,118	8,36,649	364,107	17,76,940	127,633	9,54,980	2,665,604	1,54,75,499
1881-82	1,027,944	63,45,377	838,877	45,78,455	107,049	7,09,379	237,069	11,89,642	244,628	13,21,085	2,462,507	1,41,43,838
1882-83	1,507,654	89,68,808	1,148,131	66,05,833	160,030	10,53,229	193,114	10,86,479	141,006	9,91,095	3,151,935	1,87,04,937
TOTAL	8,324,337†	8,96,57,598	7,520,408†	8,40,70,146	680,821†	78,72,612	1,976,564†	1,95,34,787	957,109†	1,04,25,467	19,459,239†	21,16,60,610

* No information available.

† Quantities defective.

Appendix, No 20.

PAPER handed in by Major *Conway-Gordon*, R.E., and referred to in his Evidence,
13th May 1884, Question 4101.

(No 130 RAILWAY)

Government of India.—Public Works Department—Railway Construction

To the Right Honourable the Earl of *Kimberley*, Her Majesty's
Secretary of State for India

My Lords,

Simla, 18 August 1883

WITH our Despatch, No 81 Railway, dated the 24th June 1882, we submitted an abstract estimate, amounting to 130 lakhs of rupees, of the cost of a metre gauge railway, 203 miles in length, to connect Jhansi, *via* Banda, with the East Indian Railway at Burgah, and we solicited sanction for the immediate prosecution of the work, stating that it formed a portion of the system of lines already contemplated for the protection of the Bundelkhand Districts from famine, and that we considered it next in protective importance to the Rewari-Ferozepore project, now approaching completion.

2 In reply, your Lordship remarked* that the information as to the grounds on which the location of the line had been determined was insufficient, and also pointed out that the recent provisional acceptance of proposals for the construction of a broad gauge railway from Bhopal to Jhansi and Cawnpore *via* Kalpi had an important bearing on the question of how best to provide for a system of railways in Bundelkhand. Your Lordship therefore deared our proposal to be "reconsidered in this light, both as regards the precise lines to be carried out, and the gauge on which they shall be constructed"

3 The questions of route and gauge have in consequence been again carefully considered, and we now beg to communicate the result, together with the abstract estimate, index section, and plan of a revised project for a broad gauge railway from Jhansi, *via* Banda, to Manikpur on the East Indian Railway, the length of which will be 180 miles, and the cost, 170 lakhs of rupees, or 94,444 rupees per mile. The large amount of important waterways, including the Betwa, the Dussan, and the Ken rivers, necessarily makes the cost of construction heavy upon any gauge, but we may remark that the estimate of 130 lakhs sent last year was found, upon further scrutiny and survey, to be far too low

4 With reference to route, we may explain that the question has already been exhaustively considered in 1878 and subsequently. In General Fraser's memorandum, dated 6th October 1877, on works of famine relief and protection in the North-Western Provinces, two lines were proposed for Bundelkhand, *viz.*, Kalpi to Mau-Ranipur, and Mau-Ranipur, *via* Banda, to Manikpur. The former of these is now practically adopted in the Great Indian Peninsula extension, with the trifling variation of being carried to Jhansi, a variation very necessary, in order better to serve the town and environs of Jhansi and the district of Jalaon, to shorten the through distance from Gwalior southwards, and to obtain suitable crossings of the Betwa river. The present project is identical

Despatch, No 8 Railway, dated 12th January 1881
Reply, No 61 Railway, dated 28th April 1881

with the second of these, prolonged from Mau-Ranipur to Jhansi. When commenting in 1881 on our proposals for a line from Cawnpore to Kalpi, moreover, your Lordship drew our attention to the necessity of extensions through the districts of British Bundelkhand. In view of the connection of Cawnpore and Jhansi, we quite concur in the view taken from the first, that the line should skirt, as far as possible, the southern portion of the British districts serving the trade centres of Mau-Ranipur, Mahoba, and Banda. Traffic from the rich country and the towns, such as Raat, between the two lines, will resort to one or the other, according to proximity of ultimate destination. Two modifications have, however, been made in the route as submitted last year,—

Firstly—The line is carried direct from Mau-Ranipur to Mahoba instead of round by Nowgong, so as to save eight miles in distance, to serve the towns to the north, especially Raat, better, and to avoid an expensive crossing of the Suku river. We do not consider the station of Nowgong to be of sufficient importance to warrant the detour to it, especially as a direct branch to it would be cheaper, and might be made at any future time if found necessary

Secondly—The line now proceeds from Banda, *via* Kirwi, to a junction with the East Indian Railway at Manikpur, instead of by the more northern route, through Baberu and Chebu, to Burgah. The route, *via* Kirwi, has always been preferred, as it will serve that station, and afford a shorter outlet to produce for export, but it was reluctantly abandoned in the first instance on account of engineering difficulties, which have now been successfully overcome. We may add that the Kirwi route was not finally decided on till an alternative from Banda, *via* Kalnjur and Nagode, to Ucheyra station had been examined and found impracticable

We append correspondence showing that the route, as now settled, has the entire approval of the Provincial Government and its local officers

5 As

* No 121 Railway, dated 7th September 1882

5 As regards gauge, we note with much satisfaction that the proposed railway from Bhopal, through Jhansi, to Cawnpore and Gwalior, which has been provisionally accepted by your Lordship, is to be on the broad gauge, and think that, under these circumstances, the Jhansi-Manikpur line must necessarily be on the broad gauge too. It would obviously be at all times inconvenient and unprofitable to place a short length of metre gauge line inside a triangle such as that which will be formed round Bundelkhand by the East Indian Railway and the Great Indian Peninsula Railway (with its extension). It would be, in fact, "a metre gauge line on which nearly all goods will have to break bulk, and on which, in consequence, goods traffic will never, from shortness of transit, attain its true development" (*vide* paragraph 8 of our No 3 Railway, of 12th January 1881). Moreover, on the occurrence of scarcity or famine, in view of which this line is specially designed, the obstruction to a free and rapid food supply, to which a break would give rise, might be serious. Upon this point the Government of the North-Western Provinces is in accord with us, and we may quote, from the Enclosure to our Despatch, No 83 Railway, of the 2nd June last, the following opinion of the Agent, Governor General in Central India —

"I have no wish, nor would it be pertinent to the intention of the present letter, to weary the Government of India with arguments familiar to them as to the advantages or disadvantages of the metre gauge. I would only urge that with special reference to Central India the arguments of the advocates of narrow gauge lines, however conclusive they may be elsewhere, are inapplicable. It cannot be asserted that there is no prospect of sufficient traffic for a broad gauge, or that the financial prospects of the metre gauge are, in Central India, better than, or as good as, those of the broad gauge."

To state our view very briefly, the Bhopal-Gwalior-Cawnpore line, being a main artery, destined to carry a large traffic, especially in wheat and seeds, must be on the broad gauge, and an isolated line, which is at both ends a feeder of broad gauge railways, cannot itself be on any other

6 The amount of traffic which this line will attract is a quantity not capable of any approximate arithmetical calculation. The Engineer in Chief submitted, on 25th August last, an elaborate report, from which we append certain extracts. From these it is apparent that the traffic in both passengers and goods, flowing east and west, is considerable, but that it is far surpassed by that which flows north and south, passing mostly through the great trade centres of Mau-Banpur and Mahoba. Cawnpore and other stations on the East Indian Railway are the destination of the exports, and the points from whence imports are distributed. There seems to be much force, with reference to this case, in a remark made by the Director of Agriculture and Commerce, North-Western Provinces: "It must be remembered that by far the greater portion of the traffic carried by Indian railways is of their own creation." It may fairly be expected that most of this cross traffic flowing northwards through these centres, both of which are on the proposed line, will be intercepted by it, that the traffic from places within a reasonable distance to the north will be attracted to it instead of making for the more distant East Indian Railway; and that the return imports in both cases will avail themselves of it. As regards Banda the case is even more clear. It will be seen that the Collector says that the City of Banda "will become a collecting centre, whence produce will be sent to Bombay on the one side, and Calcutta on the other."

7. In order that the traffic question may be viewed from another aspect, we append an interesting series of five maps, prepared by the Director of Agriculture and Commerce, North-Western Provinces, and extracts from a memorandum drawn up in our Department of Agriculture and Commerce. These maps show the distribution of wheat, oilseeds, cotton, and other crops in the districts east of Betwa and Jumna rivers, through which the proposed line would pass, as also the proportion of cultivated to total area. The agricultural produce is, in good years, far above, and has been estimated by Mr C. A. Elliott at double, the local requirements, and the surplus might be very largely increased by cultivation of waste under the stimulus of additional facilities of railway communication.

8 This tract possesses, however, another claim to such communication in its scanty and precarious rainfall, and its consequent liability to scarcity and famine.

It is on record that the districts of Banda, Hamirpur, and Jhansi suffered severely in 1813-14, in 1819, and in 1833-34, but little detailed information is available.

"The drought of 1837-38, which undoubtedly produced the most grievous famine experienced in Upper India since the commencement of British rule, had its centre region of extreme scarcity in the region between Agra and Cawnpore, and extended to all the surrounding parts of the North-Western Provinces and the Native States to the south of Agra the whole Doab, from Cawnpore to Hathras inclusive, and the trans-Jumna districts of Banda, Hamirpur, Kalpi

felt its full force. No mention is made of Jhansi or Lalitpur in the reports, but it is hardly likely that they can have altogether escaped." The effect of this famine is shown in the Map facing page 10 of the Famine Commission's Report, Part I, as "severe" from Jhansi to Mau-Banpur, and "intense" from there to the eastern borders of Banda.

During the famine of 1868 and 1869, again, "the part which suffered most was the trans-Jumna tract, which includes a portion of Muttra, Agra, and Allahabad, the whole of Banda, Hamirpur, Jalaon, Jhansi, and Lalitpur. In the two latter districts the famine

was

* The quotations in this paragraph are from the "History of Past Famines," compiled in 1879 by Mr. C. A. Elliott, C.S.I., for the use of the Famine Commission.

was severe" On this occasion the position of 1837-38 was inverted, the western portion of the tract under consideration suffering "intensely," and the eastern only "severely" (see Map facing page 13 of Famine Commission's Report, Part I) The year 1868 was one of the worst years these districts ever experienced According to elaborate calculations made by Mr C A Elliott, Jhansi lost $\frac{2}{3}$ of *kharif* and $\frac{1}{2}$ of *rabi*, Banda and Hamirpur $\frac{1}{2}$ *khurif* and $\frac{1}{3}$ *rabi*, representing a loss in the three districts of $7\frac{1}{2}$ millions of maunds out of a total yield of 16 millions Valued at the famine price of 10 seers per rupee, this loss amounts to 3,00,00,000 rupees, or even at the ordinary price of 30 seers, to about 1,00,00,000 rupees, which is more than half the cost of the proposed railway. In July 1869 the stock of food in Jhansi city fell so low that the local authorities were obliged to import grain from Cawnpore at the public expense

Banda, Hamirpur, and Jhansi again suffered "severely" in 1873-74 "The agricultural population of this tract had been struggling with a succession of bad years, which had impoverished landlord and tenant, * * * ; thus the bad autumn harvest of 1873 found the people at the end of their resources" (see Map, as before, facing page 15)

Finally, for the fourth time in 40 years, this unfortunate area was subjected to "severe" famine in 1877-78. In Banda and in three-fourths of Hamirpur the *kharif* crop "was almost a total failure" (see Map, as before, facing page 17) *

Hamirpur Settlement Report, pages 4, 46, 56, 126, and 127,

and 127, For further illustrations of the liability of
 G. S. of the North-Western Provinces, articles- these three districts to famine, we beg to refer
 "Banda" and "Jhansi," pages 93, 124, 25, 3, 254, and 258
 Jhansi Settlement Report, pages 96 and 99.

9. The precarious condition and the claims of Bundelkhand were thus urged by the Famine Commission —

"South of the Jumna lies the province of Bundelkhand With a scanty and irregular rainfall with subsoil water generally lying at a great depth, this province suffers excessively on any failure of the monsoon From its geographical position, too, it is difficult of access, and it has been hitherto impracticable to afford it relief from without, and at the approach of drought the people are much in the habit of emigrating for the time to more favoured quarters * * * There is no reason to hope that there will not be a recurrence of famine again in Bundelkhand before many years are past. The people of this province have contributed their share of the public revenues which were applied to make their countrymen secure in the Gangetic Doab, and it is surely not too much to ask that they in turn may receive what protection can be afforded them from the same source." (Famine Commission's Report, Part II., pages 156-57)

The suggestions of the Committee were the construction of canals from the Betwa and Ken rivers, and also of a railway (Part II., pages 156 and 172). The Betwa canal alone has as yet been undertaken, but it lies to the west of the river. Doubts regarding a sufficiency of water stand in the way of the Ken canal, and thus, for the principal tract to the eastward, nothing has as yet been done

10 Under these circumstances we request your Lordship's sanction to the immediate commencement of this important railway We think it more than probable, from the evidence before us, of which a brief summary has just been given in paragraphs 6 and 7, that the undertaking may prove fairly remunerative at no very distant date, but we hesitate to give the assurance that it will fulfil the conditions necessary to permit of its being classed technically as a "Productive Public Work." We prefer to undertake it under the category of "Protective," and as such it was entered in Schedule A accompanying our Despatch, No 29 (Finance and Commerce) of the 23rd January last. The amount therein provided was 1,300,000*l*, the present estimate is for 1,700,000*l*, partly in consequence of the adoption of the broad gauge, and partly because the provision made last year for bridges was, on further investigation, found to be insufficient, and a later estimate for the metre gauge gives a total of 1,430,000*l* But the increase will cause no inconvenience, as the Lieutenant Governor of the North-Western Provinces, who considers the line of the highest importance, is willing to appropriate to it the 50 lakhs of rupees which will be at his disposal for expenditure on Ordinary or Productive Works under the arrangement described in paragraph 2 of our Despatch, No 210 (Finance and Commerce), dated the 3rd August 1883.

11. The location being now complete, the line staked out, 20 lakhs provided for it in the Budget of the current year, and the Engineer in Chief's establishment, which it would be inconvenient to disperse and re-collect, being available for construction, we trust that we may be favoured by telegraph with the sanction we desire

Documents accompanying

- 1 Engineer in Chief's Report, Abstract Estimate, Index Map, and Plan of a Broad Gauge Railway from Jhansi to Manikpur.
- 2 Proceedings of the Government of India, Public Works Department, R C April 1883, Nos. 4 to 6
- 3 Extracts from a Report on Traffic for the Bundelkhand System of Railways by the Engineer in Chief, No 102 W. dated 2nd August 1882.
- 4 Five Maps showing Cropped and Cultivation in the Jalaon, Jhansi, Hamirpur, Banda and Allahabad Districts, and Extract Paragraphs 2 to 4 of an Office Memorandum from the Revenue and Agricultural Department, No. 122-21-7, dated 2nd July 1883.

We have, &c.
 (signed)

Ripon
 D M Stewart.
 E Baring.
 T. F Wilson.
 C. P. Ibert.
 S. C. Bayley.
 T C Hope.

Appendix, No. 21.

PAPERS handed in by Major *Conway-Gordon*, R.E., and referred to in his Evidence of 13th May 1884, Question 4192.

[Issue I.—No 1.]

STATEMENT SHOWING RAILWAYS OPEN FOR TRAFFIC ON 29TH FEBRUARY 1884.

RAILWAYS.	Single.	Double.	TOTAL.
5' 6" GAUGE.			
	<i>Miles</i>	<i>Miles</i>	<i>Miles.</i>
East Indian - - - - -	1,050½	458½	1,509
Eastern Bengal - - - - -	160	-	160
Oudh and Rohilkhand - - - - -	548½	-	548½
Sind, Punjab, and Delhi - - - - -	792½	4½	797
Madras - - - - -	818½	42½	861
Great Indian Peninsula - - - - -	966½	321½	1,288
Bombay, Baroda, and Central India - - - - -	415½	23	438½
Bengal Central - - - - -	114	-	114
Indus Valley and Kandahar - - - - -	652½	-	652½
Sindia - - - - -	74½	-	74½
Wardha Coal - - - - -	46½	-	46½
Patri - - - - -	22½	-	22½
Dhond-Manmad - - - - -	14½	-	14½
Bhopal - - - - -	11½	-	11½
Berar - - - - -	14	-	14
The Nizam's - - - - -	121	-	121
Punjab Northern - - - - -	374½	-	374½
Rajputana-Malwa - - - - -	1½	-	1½
Calcutta and South-Eastern - - - - -	56½	-	56½
Northern Bengal - - - - -	17½	-	17½
Patna-Gya - - - - -	57	-	57
Daldarnagar-Ghasipur - - - - -	12	-	12
Amritsar-Pathankot - - - - -	51	-	51
TOTAL, 5' 6" Gauge - - -	6,468½	860	7,318½
4' 0" GAUGE			
Nalhati - - - - -	27½	-	27½
TOTAL, 4' 0" Gauge - - -	27½	-	27½
3' 3½" GAUGE.			
South Indian - - - - -	654½	-	654½
Deoghur - - - - -	5½	-	5½
Assam - - - - -	98½	-	98½
Pondicherry - - - - -	7½	-	7½
Bhavnagar-Gondal - - - - -	192½	-	192½
Jodhpore - - - - -	18½	-	18½
Mysore - - - - -	86	-	86
Punjab Northern - - - - -	71½	-	71½
Rajputana-Malwa - - - - -	1,255	-	1,255
Northern Bengal - - - - -	239	-	239
Tirhoot - - - - -	193	-	193
Hathras-Muttra-Achnera - - - - -	52	-	52
Cawnpore-Farukhabad - - - - -	86	-	86
Nagpur-Chhattisgarh - - - - -	149	-	149
Burma - - - - -			
Rangoon-Toungoo - - - - -	161	-	161
Sitang Valley - - - - -	42½	-	42½
TOTAL, 3' 3½" Gauge - - -	3,255½	-	3,255½
2' 6" GAUGE			
The Gaskwar of Baroda's - - - - -	58½	-	58½
Kaunis-Dhurla Tramway - - - - -	32½	-	32½
TOTAL, 2' 6" Gauge - - -	91	-	91
2' GAUGE.			
Darjeeling-Himalayan - - - - -	50	-	50
TOTAL, 2' Gauge - - -	50	-	50
GRAND TOTAL OPEN FOR TRAFFIC - - -	9,887½	860	10,737½

R A Sargeant Major, R.E.,
Under Secretary to Government of India, Public Works Department,
Railway Branch.

Calcutta, 5 March 1884.

[Issue I.—No. 2]

STATEMENT SHOWING RAILWAYS UNDER CONSTRUCTION ON
29TH FEBRUARY 1884

RAILWAYS.	TOTAL
5' 6" GAUGE.	
	<i>Miles</i>
East Indian - - - - -	4
Oudh and Rohilkhand - - - - -	185½
Bengal Central - - - - -	11½
Serofuh-Tarakessur - - - - -	22
Indus Valley and Kandahar - - - - -	1
Bhopal - - - - -	50½
Rajpura-Patiala - - - - -	16½
Itanagar-Manikpur - - - - -	180
Calcutta and South-Eastern - - - - -	1½
Amritsar-Pathankot - - - - -	15
TOTAL 5' 6" Gauge - - - - -	486½
3' 3½" GAUGE.	
Bengal and North-Western - - - - -	456
Assam - - - - -	86½
Rohilkhand-Kumaon - - - - -	54½
Southern Mahratta - - - - -	697½
West of India Portuguese - - - - -	49½
Rajputana-Malwa - - - - -	191½
Bellary Kistna - - - - -	275
Cuddapah-Nellore - - - - -	72
Jodhpore - - - - -	24
Mysore - - - - -	87
Northern Bengal - - - - -	171½
Tirhoot - - - - -	82½
Dacca-Mymensingh - - - - -	86
Hattian-Mutra-Achmeyra - - - - -	1
Cawnpore Farukhabad - - - - -	112
Bareilly-Philibhit - - - - -	36
Burma - - - - -	168
TOTAL 3' 3½" Gauge - - - - -	2,563½
2' 6" GAUGE	
Burdwan-Kutwa - - - - -	40
Thabone - - - - -	8
Wadhwan Rajkot - - - - -	54
TOTAL 2' 6" Gauge - - - - -	102
2' GAUGE	
Kokilamukh - - - - -	26½
GRAND TOTAL UNDER CONSTRUCTION - - - - -	3,178½

Calcutta, }
7 March 1884 }R A Sargeant, Under Secretary to Government,
Public Works Department, Railway Branch.

[Issue I.—No. 3.]

RAILWAYS ENTERED IN SCHEDULE A.

No	RAILWAY	Gauge	Length in Miles.	Cost in Conventional Sterling	Outlay to End of 1883-84	Probably 1884-85.	Balance needed to Complete at End of 1883-84.	REMARKS	Reference to Para. of the S.D. Gazette in File
PROTECTIVE.									
PUNJAB									
1	Rewari Ferozapore with Branch to Panjka	Metre	803	1,418,400	851,103	378,000	489,300	80 miles open, 61 more to be opened shortly	—
NORTH WESTERN PROVINCES AND GUJR									
2	Jhansi Manickpur	Broad	180	1,708,000	3,323	148,000	1,548,378	Under construction	3-16
MADRAS									
3	Viangapatam Raipur	Metre	350	3,900,000	-	-	3,900,000	—	—
4	Bellary Kistna	"	235	1,775,000	3,088	159,000	1,625,404	Under construction	3-45
5	" Hindupur Extension	"	212	700,000	-	-	700,000	—	—
6	Cuddapah Nellore	"	66	368,400	-	30,000	338,400	Under construction	3-14
7	" Kadiri Extension	"	130	650,000	-	-	650,000	—	—
8	Damacherla-Vellore, Arni Villipuram	"	140	640,000	-	-	640,000	—	—
9	Misor Family Lines in Madras	"	100	900,000	-	-	900,000	—	—
	TOTAL		1,688	11,444,800	861,910	600,100	10,173,790		
PRODUCTIVE AND PROTECTIVE									
BENGOAL									
10	Assam-Behar—Moorfarpur-Hajipur	Metre	34	230,000	3,881	100,000	114,118	Under construction	3-14
11	Sonepur-Hajipur	"	9½	145,000	-	-	145,000	—	—
12	Jhingarpur-Dimaipur	"	200½	7,405,000	-	100,000	7,305,000	—	—
13	Masbari Branch	"	-	-	-	-	-	—	—
14	Kaunia Dhubri	"	54	660,000	-	-	660,000	—	3-14
15	Barakur Nagpur	Broad	627	6,300,000	-	-	6,300,000	A recovery of 800,000 l. is anticipated by the sale of the Nagpur-Ghatisgarh Railway to the Company	1-25 29 87
NORTH WESTERN PROVINCES AND GUJR									
16	Bhopal Jhansi-Gwalior and Jhansi-Cawnpur	Broad	385	3,500,000	-	-	3,500,000	—	1-29 87 2-11
CENTRAL PROVINCES									
17	Bilaspur-Etawah	Broad	383	3,450,000	-	-	3,450,000	—	3-16, 17 38-110
BOMBAY									
18	Western Deccan	Metre	242½	1,800,000	-	-	1,800,000	—	1-25 61 3-16
MYSOOR									
19	Bankapur-Hardha	Metre	50	300,000	-	-	300,000	—	3-87
	TOTAL		1,688½	13,737,000	3,881	200,000	15,681,119		1-87
PRODUCTIVE									
PUNJAB									
20	Wasrahad Shikot	Broad	32½	95,000	-	75,000	20,000	Line opened	—
21	Amritsar-Pathankot	"	65	600,000	300,024	300,000	120,378	51 miles open (Military).	—
MADRAS									
22	Belwada to Nizam's Frontier	Broad	30	350,000	-	-	350,000	File Despatch No 45 (Political) dated 30th April 1885.	—
CENTRAL PROVINCES									
23	Watara Chanda	Broad	35	330,000	-	-	330,000	File Despatch No 65 (Political), dated 30th April 1885	—
BURMA									
24	Prome-Alamyo	Metre	42	375,000	-	-	375,000	(Military).	—
25	Rangoon Toungoo (Sittang Valley)	"	163	1,170,000	382,503	322,000	195,497	(Military) under construction	1-40.
NORTH WESTERN PROVINCES AND GUJR									
26	Bareilly Pilibhit	Broad	32½	175,000	27,167	90,000	63,833	Under construction.	—
27	Farakhabad Hathras (including Kasganj-Soron Branch)	Metre	111	561,000	102,500	230,000	46,400	Will probably be opened before 31st March	—
	Bridge over the Jumna at Mottra	"	1	-	-	-	-	Under construction	—
BENGOAL									
28	Decca-Mymensingh	Broad	35	600,000	47,815	223,500	229,585	Under construction.	—
29	Ranghat-Saasipore-Bhagwan-gole	"	83	318,000	1,330	18,750	790,000	This line is now in abeyance as the Bengal Central Company cannot undertake it at present.	1-26 29 34 46 3- 810 4-2, 3-6
	TOTAL		684	4,992,000	1,065,200	1,373,250	2,507,541		
			4,322½	25,173,800	1,430,000	6,461,250	30,268,450		

[Issue I—No. 4.]

RAILWAYS ENTERED IN SCHEDULE B

No	RAILWAYS	Gauge.	Length in Miles	Estimated Cost in Conventional Sterling	REMARKS
PRODUCTIVE AND PROTECTIVE					
NORTH-WEST PROVINCES AND OUDH					
1	Paranpur-Kheri-Sitapur-Lucknow	Metre	178	£ 650,000	
2	Lucknow - Rai Bareilly - Pertabgarh - Jaunpur	"	148	500,000	
BENGAL AND ASSAM					
3	Benares Palamow - Lohardugga - Cuttack-Poree	Broad	541	5,337,000	Previous figures and route revised according to recent reconnaissances.
MADRAS					
4	Palghat-Dindigul	Metre	100	300,000	
5	Madura-Paumben	"	94	300,000	
6	Beylore-Gudalar-Mysore	Broad	128	900,000	
BOMBAY					
7	Bara Station Pundarpore-Miraj	Broad	107	450,000	
			1,291	8,437,000	
PRODUCTIVE					
PUNJAB					
8	Rawalpindi to Murree	2' 6"	46	250,000	
9	Loodhiana to Ferozapore	Broad	80½	435,000	Military
10	Fazilka-Okara	"	40	200,000	
41	Khanpur-Mithankot	"	21	125,000	
12	Bnera-Daryakhan	Metre	180	450,000	Military
13	Ambala-Kalka	Broad	40	800,000	- ditto.
14	Jullundur-Hoshiarpur	"	26	156,000	- ditto.
NORTH-WEST PROVINCES AND OUDH.					
15	Moradabad Ramnagar	Broad	49	400,000	Military
16	Hurdwar-Dehra-Bajpore	Metre	40	220,000	- ditto.
CENTRAL INDIA AND CENTRAL PROVINCES.					
17	Jubbulpore-Gondia	Metre	135	1,070,000	
18	Bhopal-Ujjain	"	110	880,000	
19	Rutlam-Godra	"	110	1,000,000	
BENGAL AND ASSAM.					
20	Gya-Palamow	Broad	83	612,000	Previous figures and route revised according to recent reconnaissances.
21	Bhaugalporo-Bowsee	Metre	80	140,000	
22	Kisenganj-Kotechandpur	2'	19	40,000	
23	Chittagong-Chandpur-Cornilla	Metre	128½	1,082,000	Chandpur substituted for Cornilla as the river terminus.
24	Cornilla-Cachar	"	175	1,406,000	
ASSAM.					
25	Cachar-Golaghat-Dibrugarh	Metre	311	3,003,000	Previous figures and route revised according to recent reconnaissances.
26	Branch from the above at Lumingto Gowhata	"	123	976,000	- ditto - ditto - ditto.
MADRAS.					
27	Mayaveram-Tranquebar	Metre	15	65,000	Matupet will probably be substituted for Tranquebar as a terminus.
28	Tinnevely-Trevarndrum-Quilon by Aramboly Pass	"	132	700,000	This project is being completely revised and re-surveyed on a new route and the Arankoon Pass.
29	Nilgudi Railway, Metapolthum Conoor	"	12	200,000	
30	Shoranoor Cochin	Broad	59	660,000	
31	Beylore-Calicut	"	7	110,000	This will probably be constructed as an extension of the Madras Railway
BOMBAY					
32	Karwar-Hubli	Broad	109	794,000	
33	Bara Station to Barvi	"	30½	130,000	
34	Surat-Baridoh-Songadh Nandurbar	"	91	455,000	
			2,141½	15,851,000	
TOTAL MILEAGE AND COST			8,452½	24,388,000	

Appendix, No. 22.

PAPERS handed in by Major *Conway-Gordon*, R E, and referred to in his Evidence of 13th May 1884, Question 4316.

(Nos. 1174—80 R., dated 6th October 1868)

RESOLUTION by the Government of India, Public Works Department

Read again —

From Secretary of State to Government of Madras, No 12 of 1866
 From Government of India to Secretary of State, No. 26 of 1867
 From Secretary of State to Government of India, No 8 of 1867
 From Secretary of State to Government of India, No 1 of 1867
 From Secretary of State to Government of India, No 37 of 1867.
 Public Works Department Circular, No 10 R. of 1867.
 From Government of India to Secretary of State, No 104 of 1867
 From Government of the Punjab, No 97, dated 20th September 1867
 To Government of the Punjab, No 981 R., dated 31st October 1867
 Public Works Department Resolution, Nos 84—8 R., dated 21st January 1868
 From Government of India to Secretary of State, No 15 of 1868
 To Chief Commissioner of Oudh, No 325 R., dated 19th March 1868
 From Government of Bombay, No. 403, dated 27th February 1868
 To Government of Bombay, No 362 R., dated 27th March 1868
 From Government of Madras, No 688, dated 2nd March 1868, and Enclosures
 To Government of Madras, No 359 R., dated 26th March 1868
 From Government of Madras, No 1042, dated 2nd April 1868
 To Government of Madras, No 511 R., dated 30th April 1868
 From Government of India to Secretary of State, No 79 of 1868
 Public Works Department Circular, No 6 R. of 1868
 From Secretary of State to the Government of Madras, No 4 of 1868.
 From Secretary of State to the Government of India, No 17 of 1868
 From Public Works Department to Government of Madras, No 499 R., dated 25th April 1868.
 From Government of India to Secretary of State, No 76 of 1868
 From Chief Commissioner of Oudh, No 420 R., dated 13th April 1868, and Enclosures
 From Chief Commissioner of Oudh, No 482 R., dated 24th April 1868, and Enclosures
 To Chief Commissioner of Oudh, No 819 R., dated 30th April 1868, and Enclosures
 From Government of India to Secretary of State, No 80 of 1868
 From Chief Commissioner of Oudh, No 666 R., dated 17th June 1868.
 To Chief Commissioner of Oudh, No 761 R., dated 8th July 1869
 From Government of India to Secretary of State, No 103 of 1868.
 From Chief Commissioner of Oudh, No 877 R., dated 15th August 1868
 To Chief Commissioner of Oudh, No. 994 R., dated 27th August 1868

Read also —

From Government of Bengal, No. 530 G., dated 31st March 1868
 From Government of Punjab, No 89 P—98 D., dated 8th April 1868.
 From Government of Madras, No 1341, dated 30th April 1868
 From Chief Commissioner of Oudh, No 677 R., dated 19th June 1868
 From Government of Bombay, No 1587, dated 28th July 1868
 From Government of Bengal, No. 1744 G., dated 28th August 1868.
 From Government of Bombay, No. 1867, dated 7th September 1868
 From Secretary of State to the Government of India, No 48 of 1868.
 From Secretary of State to the Government of India, No 49 of 1868.
 A Tabular Statement of the maxima fares and rates sanctioned for all Guaranteed Railways.

OBSERVATIONS—The Secretary of State having decided on the general application of the principle of sanctioned maxima rates and fares within which the Guaranteed Railway Companies should have the option of varying the actual charges made to the public, the Government of India, in Circular No. 10 R. of 1867, delegated the settlement of the maxima to the Local Governments, merely reserving to itself a power of interference

interference in those matters only in which, in accordance with what was then understood to be the desire of the Secretary of State, it seemed expedient to fix a general policy. The charges for the lowest class of passengers and for food-grains and coal were accordingly excepted.

2 In regard to these it was held to be the duty of the Government of India to see that the Guaranteed Railways were brought into the most extensive use by the people of India, consistently with a due regard to the profits of the shareholders, and it was ruled, with reference to the known carrying cost, that for the lowest class of passengers on all opened lines, the existing fares should be the maxima, but that, on all lines opened hereafter, a fare of 2 pies per mile should be the maximum, the minimum accommodation afforded to the lowest class being covered carriages without seats.

3 For food-grains and coal, it was ruled in view of exceptional times, of cases of the passage of gram from the territories of one Local Government to those of another, of cases of extreme pressure from other descriptions of traffic, and in the case of coal, of the possible competition of one railway with another, that on all open lines the existing rates should be the maxima, but that on all lines subsequently opened, a rate of one-fourth of a pie per maund per mile should be the maximum.

4 It was, however, explained that it was not intended that the fares and rates thus laid down should be blindly adhered to under all circumstances, but that any increase on them should not be allowed without the previous sanction of the Government of India. The desideratum is that a maximum of profit shall be obtained, not as is quite possible, from a minimum, but from a maximum of traffic. Having indicated the general policy of the Government, it was also thought desirable to have means of seeing that this policy is uniformly pursued, as also of regulating matters by which a railway company working within the territories of one Local Government, may affect a railway company working within the territories of another Local Government.

5 The maxima fares and rates which have been sanctioned for each line under these orders are exhibited in the statement just read. The practical effect of these orders has, on the whole, been in satisfactory accordance with the views of the Government of India.

6 For the Madras line a maximum fare of 3 pies per mile has been approved for the lowest class of passengers. This charge is less than that actually in operation on the Great Southern of India Railway when Circular No. 10 R of 1867 was issued; but the running of only two classes of passengers on that line, the lowest at 5 pies, was simply an experiment which had failed so far as it had gone. The Madras Government should be requested to report the maxima rates for food-grains and coal in force. It is presumed that on all the lines of that Presidency they are now placed in the lowest class, if not in a special one.

7 The Government of Bombay represented that the working expenses on railways in that Presidency were higher than on other Indian lines, and proposed a maximum fare of 4 pies per mile for the lowest class of passengers, adding that on the Great Indian Peninsula Railway a 2½ pies fare was being tried in local trains in carriages, with single roofs and without seats, and that there was every disposition to provide for this class of traffic. On this line four classes of fares have been sanctioned, the maximum of the lowest being 3 pies, and practically the same has been authorised for the other two railways, those of the Bombay, Baroda, and Central and the Sindh Companies, under the control of the Bombay Government, for, though a maximum of 8 pies has been fixed for the third class on those lines, and a fourth class is not at present run, it is provided that such must be run, subject to a maximum of 3 pies, whenever the present third class fare is in excess of 4 pies.

Food-grains and coal have been placed in the lowest class of goods.

8. On the East Indian and Eastern Bengal Railways the existing lowest class fares and rates have been made the maxima. The carriages of the lowest class of passengers, where there are four classes, are unprovided with seats and venetians.

On the East Indian line food-grains have for some years been carried at one-fourth of a pie per maund per mile for distances above 300 miles.

9 On the Punjab and Delhi Railways the maximum fare of the lowest class of passengers is 2½ pies per mile for the line from the Beas to Rajghat, near Mooltan, and 3 pies per mile for the Meerut section.

10 For the Lucknow line of the Oudh and Rohilkhand Railway, which lately came under guarantee, the fares and rates settled are those laid down by the Government of India for lines opened subsequent to the issues of the orders, viz., 2 pies per mile for the lowest class of passengers, and ¼ pie per maund per mile for food-grains and coal.

11 The Company has remonstrated against these rates, but the result, so far as it is yet allowable to judge, has justified the action of the Government. The goods traffic of this short (42 miles long) line, with the Ganges at Cawnpore unbridged, is necessarily too limited to admit of any judgment being formed, but the passenger traffic has expanded in a remarkable degree under the influence of the low fare of 2 pies. It came into force

on the 1st of May last, and in the three months following, the number of passengers carried was 88 per cent. in excess of the corresponding period of the previous year, and 42 per cent. of the previous three months. The receipts were respectively 9 per cent. better and 9 per cent. worse.

12 The short time this fare has been in force, and the newness and shortness of the line, which was only opened in April 1867, prevent any generalization from these results, but it must be admitted that they show that the railway has been brought into more extensive use by the mass of the people. The continued working of this fare will be watched with interest.

RESOLUTION—Having briefly recapitulated the action that has followed on the Circulars Orders of 1867, in respect of those fares and rates, the control of which was reserved by the Government of India, and having thus practically exemplified the general policy which the Government of India deared to see followed, the Governor General in Council is now pleased to declare, in accordance with the recently expressed wishes of the Secretary of State, that the maxima of all fares and rates shall henceforth be fixed by Local Governments, that the actual charges within such maxima shall be regulated by the Railway Companies, and that the maxima shall leave a reasonable margin for the exercise of a discretion by the companies in varying the working rates, as circumstances may, in their opinion, require

2 Any modifications of the maxima that may from time to time be made should be reported to the Government of India for information. It has already been ordered that the actual fares and rates charged should be stated in the reviews of the Revenue Accounts.

ORDER.—Ordered, that a copy of this Resolution, and of the Tabular Statement, be forwarded to the Governments noted in the margin for information and guidance, and to the Government, North Western Provinces, and Chief Commissioners of Central Provinces and Oudh, for information only

Madras.
Bombay
Bengal.
Punjab.

TABLE SHOWING THE MAXIMA FARES AND RATES SANCTIONED FOR ALL GUARANTEED RAILWAYS.

	MADRAS		BOMBAY			BENGAL					
	Madras Railway	Great Southern of India Railway	Great Indian Peninsula Railway	Bombay, Baroda, and Central India Railway	Sindh Railway	East Indian Railway	Eastern Bengal Railway	Calcutta and South Eastern Railway	Punjab Railway	Delhi Railway	Oudh and Rohilkhand Railway
PASSENGERS	<i>Pies per Mile.</i>	<i>Pies per Mile</i>	<i>Pies per Mile.</i>	<i>Pies per Mile.</i>	<i>Pies per Mile.</i>	<i>Pies per Mile</i>	<i>Pies per Mile.</i>	<i>Pies per Mile.</i>	<i>Pies per Mile</i>	<i>Pies per Mile.</i>	<i>Pies per Mile</i>
1st Class - - - - -	18	18	24	24	24	18	18	18	18	18	18
2nd „ - - - - -	5	5	12	12	12	9	9	9	9	9	9
Intermediate - - - - -	-	-	-	-	-	4½	4½	-	-	-	-
3rd Class - - - - -	8	8	8	8	8	8	8	8	2½	2½ and 8	8
4th „ - - - - -	-	-	8	8	8	-	-	-	-	-	-
GOODS	<i>Pies per Ton per Mile.</i>	<i>Pies per Ton per Mile</i>	<i>Pies per Ton per Mile.</i>	<i>Pies per Ton per Mile</i>	<i>Pies per Ton per Mile.</i>	<i>Pies per Maund per Mile</i>	<i>Pies per Maund per Mile</i>	<i>Pies per Maund per Mile</i>	<i>Pies per Maund per Mile</i>	<i>Pies per Maund per Mile.</i>	<i>Pies per Maund per Mile</i>
1st Class - - - - -	12	12	12	12	12	½	½	½	½	½	½
2nd „ - - - - -	14	14	18	18	18	½	½	½	½	½	½
3rd „ - - - - -	16	16	24	24	24	¾	¾	¾	¾	¾	¾
4th „ - - - - -	24	24	36	36	36	1	1	1	1	1	1
5th „ - - - - -	86	86	54	54	54	2	2	2	2	2	2
Food-grains - - - - -	12	12	12	12	12	½†	½	½	½	½	½
Coal - - - - -	8	8	10	10	10	½†	½	½	½	½	½

* On the Bombay, Baroda, and Central India and Sindh Railways the 4th class is compulsory at a maximum of 3 pies per mile whenever the 3rd class exceeds 4 pies per mile.
 † All food-grains are in the 1st class, but for distances above 300 miles they are carried at the rate of ½ pie per maund per mile.

061.

6 x 4

SELECT COMMITTEE ON EAST INDIAN RAILWAYS.

PAPERS handed in by Major L. Conway-Gordon, R.E., and referred to in his Evidence of 13th May 1884, Question 4336

[Issue IV—No. 1]

COMPARATIVE STATEMENT SHOWING THE COST OF CONSTRUCTION OF BROAD AND NARROW GAUGE RAILWAYS, BASED ON THE CAPITAL OUTLAY ON 31ST DECEMBER 1882.

RAILWAYS	Length of Line Open on 31st December 1882	Year in which first Opened	Total Capital Outlay to 31st December 1882 (exclusive of Steamboat Service and Suspense)	Average Cost per Mile (exclusive of Steamboat Service and Suspense)	Total Length of Single Track, including Sidings	Average Cost per Mile of Single Track (exclusive of Steamboat Service and Suspense)	REMARKS.
	<i>Miles</i>		<i>Rs</i>	<i>Rs.</i>	<i>Miles</i>	<i>Ra.</i>	
BROAD GAUGE.							
<i>Guaranteed Railways.</i>							
Great Indian Peninsula - - - - -	1,288 25	1853	25,22,40,649	1,95,808	1,998 75	1,26,203	
East Indian - - - - -	1,506 77	1854	33,77,69,915	2,24,162	2,319 14	1,45,640	
Madras - - - - -	860 86	1856	11,15,44,509	1,39,573	996 50	1,11,976	
Bombay, Baroda, and Central India - - - - -	460 93	1860	8,56,40,307	1,85,682	548 80	1,55,842	
Sind, Punjab, and Delhi - - - - -	663 61	1861	11,21,50,810	1,69,026	796 60	1,40,804	
Eastern Bengal - - - - -	159 63	1862	3,32,13,066	2,08,063	218 50	1,62,004	
Calcutta and South-Eastern* - - - - -	28 00	1862	67,20,634	2,40,022	36 47	1,89,473	
Oudh and Rohilkhand - - - - -	546 86	1867	5,87,01,518	1,07,345	628 4	93,406	A length of 28 miles has since been added to the Calcutta and South-Eastern Railway, viz., from Sonarpur to Diamond Harbour
TOTAL Guaranteed Broad Gauge Railways - - - - -	5,514 80		99,78,80,407	1,80,945	7,542 20	1,32,306	
<i>State Railways</i>							
Wardha Coal - - - - -	46 00	1874	51,62,660	1,14,726	52 87	97,648	
Punjab Northern - - - - -	418 75	1875	6,10,71,973	1,45,843	468 61	1,30,325	
Indus Valley and Caudahar - - - - -	652 60	1878	7,80,32,391	1,19,572	723 97	1,07,784	
Dhond-Manmad - - - - -	145 75	1878	99,25,269	68,098	169 13	62,372	Has no rolling stock, worked by the Great Indian Peninsula Railway.
Sindia - - - - -	74 42	1878	87,35,891	1,17,386	62 26	1,06,198	
Patna-Gys - - - - -	67 20	1879	37,97,742	66,394	69 02	60,358	
Dildarnagar-Ghasipur - - - - -	12 00	1880	6,24,104	62,000	13 95	44,738	No rolling stock, worked by the East Indian Railway.
TOTAL State Broad Gauge Railways - - - - -	1,405 72		16,73,50,039	1,19,004	1,663 71	1,07,012	
TOTAL for Broad Gauge, Guaranteed and State Railways - - - - -	6,920 52		1,16,52,30,446	1,69,373	9,105 91	1,27,904	

0 61.	BROAD GAUGE LINES ESTIMATED FOR					
	Bilaspur-Etawah	-	-	352 50	-	-
	Nagpur-Bengal	-	-	479 00	-	-
	Jhansi-Manikpur	-	-	180 00	-	-
			1,011 50	-	-	
				7,98,00,000		69,602
						82,040
						88,888
	<i>Native States</i>					
	Khamnour	-	-	8 00	1870	4,82,570
						60,321
						8 39
	Amraoti	-	-	6 00	1871	4,84,338
						72,390
	Nizam's	-	-	117 10	1874	1,21,88,480
						1,04,089
	Biopal	-	-	11 50	1882	4,46,863
						38,771
						126 61
						96,252
						38,770
						17 50
	TOTAL for Broad Gauge Native States Railways					
				142 60	-	1,35,49,251
						95,015
						102 40
						88,858
	METRE GAUGE					
	South Indian	-	-	655 00	1861	4,30,21,429
						85,681
						719 26
	Rajputana Malwa	-	-	1,115 55	1873	8,74,13,893
						78,359
						1,233 35
	Tirhoot	-	-	82 00	1874	61,00,775
						74,509
						92 28
						66,244
5 21.	Muttra-Hathras	-	-	29 00	1875	10,47,748
						36,129
						32 00
	Muttra Achnera	-	-	22 75	1881	6,26,164
						27,524
						24 87
	Cawnpore-Farakhabad	-	-	86 50	1880	31,31,013
						86,197
					96 24	
						32,239
						25,177
	Rangoon and Irrawaddy Valley	-	-	161 00	1877	1,26,82,765
						78,775
						192 72
	Northern Bengal	-	-	243 00	1877	2,01,06,765
						82,744
						272 90
	Nagpur and Chattisgarh	-	-	149 00	1880	67,26,174
						65,028
						164 00
						53,629
	TOTAL for Metre Gauge Railways					
				2,543 89	-	18,29,34,746
						71,913
						2,828 06
						64,685
	METRE GAUGE LINES ESTIMATED FOR					
	Jhansi, Manikpur	-	-	180 00	-	1,30 81,900
						78,238
						-
						-
	<i>Native States.</i>					
	Bhavnagar-Gondal	-	-	198 00	1880	83,00,328
						43,318
						218 75
	Mysore	-	-	86 75	1881	37,10,616
						43,271
						95 08
						38 218
						39,025
	TOTAL for Metre Gauge Native States Railways					
				278 75	-	1,20,70,844
						43,303
						313 88
						38,463

* The Calcutta and South-Eastern State Railway has been classed in this Statement as a Guaranteed Line, having originally been constructed as such
Note—Extracted from the Preliminary Administration Report of the Director General of Railways for 1882-83

Calcutta,
7 March 1884. }

R. A. Surgeant, Major, R. E., Under Secretary to Government of India,
Public Works Department, Railway Branch.

ABSTRACT STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING UNITS OF TRAFFIC—COACHING TRAFFIC (HALF-YEAR ENDING 30TH JUNE 1881).

From Statistics compiled in accordance with Public Works Department Circular, No 7, Railway, dated 17th February 1881

RAILWAYS	Coaching Expenses [£]	Gross Ton-Mileage of Coaching Trains			Total Passenger Unit Mileage	Other Coaching Traffic Ton-Mileage	Cost of Hauling a Passenger Unit One Mile	Cost of Hauling other Coaching Traffic per Ton.
		Freight.	Dead Weight.	TOTAL.				
BROAD GAUGE.								
	<i>Rs</i>	<i>Ton-Miles</i>	<i>Ton-Miles</i>	<i>Ton-Miles.</i>	<i>Unit-Miles</i>	<i>Ton-Miles</i>	<i>Pies</i>	<i>Pies</i>
East Indian	13,35,133	23,843,317	263,234,011	287,087,332	322,689,375	4,104,883	0 70	7 12
Great Indian Peninsula	14,02,666	13,637,016	170,391,998	184,049,014	180,386,765	2,295,924	1 14	28 01
Sind, Punjab, and Delhi	10,68,030	9,631,924	129,134,658	138,766,582	130,406,143	1,636,075	1 28	22 29
Madras	3,01,890	7,121,800	75,032,647	82,154,447	100,442,762	993,449	1 37	16 34
Bombay, Baroda, and Central India	4,89,125	7,911,437	69,958,187	77,269,544	109,210,596	1,209,619	0 79	6 74
Eastern Bengal	3,26,851	2,825,661	29,353,028	32,178,691	43,114,140	198,824	1 27	38 76
Oudh and Rohilkhand	3 98,929	4,886,701	55,121,853	60,008,554	75,877,355	300,049	0 94	16 61
Indus Valley	6,26,746	4,880,852	60,989,546	65,370,398	52,852,093	1,453,360	1 95	11 84
Punjab Northern	6,31,162	3,467,024	41,873,630	46,340,654	62,650,207	280,667	2 14	24 08
Patna and Gya	80,454	585,295	5,577,531	6,342,826	9,482,174	14,025	1 52	71 01
Nizam's	1,00,289	762,885	11,525,266	12,288,151	10,660,024	109,700	1 65	24 83
TOTAL of all Broad Gauge Railways	72,30,263	79,383,914	911,472,279	990,856,193	1,087,771,604	12,566,575	1 09	15 47
Percentage of Freight and Dead Weight	- - -	8 01	91 99	100 00	—	—	—	—
TOTAL, excluding East Indian Railway	59,04,130	55,630,597	648,238,264	703,768,861	766,082,229	8,491,692	1 27	19 49
Percentage of Freight and Dead Weight	- - -	7 69	92 11	100 00	—	—	—	—
NARROW GAUGE.								
South Indian	4,68,418	4,816,080	31,687,136	35,503,216	76,604,052	190,452	1 07	42 02
Reputana	6,44,315	5,490,361	57,582,039	63,472,400	85,731,022	498,152	1 28	27 78
Holkar and Sindia-Neesuch	2,82,022	1,945,923	15,652,500	17,647,523	29,912,623	18,376	1 70	18 40
Nagpur and Chhattisgarh	29,162	231,600	1,733,790	1,965,450	3,722,074	5,809	1 49	11 47
Rangoon and Irrawaddy Valley	1,87,293	1,769,029	14,992,714	16,761,743	28,014,609	74,982	1 17	44 08
Northern Bengal	1,97,484	1,063,201	11,373,931	12,427,132	15,562,412	103,592	1 54	24 06
Tirhoot	65,909	532,462	3,774,267	4,306,729	6,349,182	27,291	1 09	55 10
Cawnpore and Farukhabad	50,779	419,185	4,518,709	4,937,894	6,689,560	16,624	1 36	37 27
Dhaviingar Gondal	1,04,634	969,762	6,924,885	7,894,647	15,247,522	48,830	1 20	37 46
TOTAL of Narrow Gauge Railways	19,69,416	17,476,703	147,141,971	164,618,734	269,843,206	1,151,117	1 20	30 46
Percentage of Freight and Dead Weight	- - -	10 61	89 39	100 00	—	—	—	—

ABSTRACT STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING UNITS OF TRAFFIC—COACHING TRAFFIC (HALF-YEAR ENDING 31ST DECEMBER 1881).

From Statistics compiled in accordance with Public Works Department Circular, No. 7, Railway, dated 17th February 1881

RAILWAYS.	Coaching Expenses.	Gross Ton-Mileage of Coaching Traffic.			Total Passenger Unit Mileage	Other Coaching Traffic Mileage.	Cost of Hauling a Passenger, One Mile.	Cost of Hauling other Coaching Traffic per Ton.
		Freight.	Dead Weight.	TOTAL.				
	Rs	Ton-Miles	Ton Miles	Ton-Miles	Unit Miles	Ton-Miles	Pces	Pces
BROAD GAUGE.								
East Indian	14,40,454	22,460,934	268,631,194	291,092,118	308,534,428	3,604,092	0 77	8 30
Great Indian Peninsula	16,79,689	10,643,186	161,124,459	171,767,644	152,902,994	1,398,687	1 45	57 86
Sind, Punjab, and Delhi	11,34,664	7,207,619	117,886,010	125,093,629	102,405,501	920,645	1 80	36 54
Madras	7,72,103	6,099,718	73,116,027	79,215,745	96,090,860	737,617	1 39	19 61
Bombay, Baroda, and Central India	7,43,276	7,972,032	76,386,036	83,458,068	99,450,930	988,807	1 81	13 07
Eastern Bengal	2,46,802	2,367,663	27,737,547	30,695,210	43,796,738	273,078	0 86	16 45
Oudh and Rohilkhand	4,85,882	4,394,642	59,490,091	62,884,733	68,393,922	257,391	1 28	22 49
Indus Valley	4,23,931	3,040,361	55,3,6597	58,401,958	40,477,280	576,067	1 80	14 46
Punjab Northern	5,84,923	2,856,413	40,904,077	43,760,490	48,801,552	203,491	2 47	19 03
Patna and Gya	84,609	714,895	6,068,502	6,783,397	11,603,007	16,092	1 80	70 81
Nizam's	1,05,703	683,187	10,983,264	11,666,451	10,019,346	67,793	1 74	41 62
TOTAL of all Broad Gauge Railways	76,01,186	68,830,649	896,694,394	965,025,043	977,696,664	9,044,390	1 27	21 89
Percentage of Freight and Dead Weight	- - -	7-08	92 92	100 00	-	-	-	-
TOTAL, excluding East Indian Railway	61,80,732	45,869,715	628,063,210	673,932,925	669,162,138	5,440,298	1-51	30 86
Percentage of Freight and Dead Weight	- - -	6 81	93 19	100 00	-	-	-	-
NARROW GAUGE								
South Indian	4,53,207	4,536,828	32,119,011	36,655,839	73,080,117	124,722	1 10	51 17
Rajputana	7,49,829	6,165,676	65,792,976	71,948,651	91,761,135	693,165	1 42	28-75
Holkar and Sindia Neemuch	2,94,068	2,026,367	19,076,967	21,101,334	30,467,691	182,629	1 73	19 83
Nagpur and Chhattisgarh	39,185	231,066	1,732,444	1,963,510	3,704,675	6,830	1 96	39 25
Banooon and Irrawaddy Valley	2,12,248	1,325,044	11,997,612	13,322,656	21,136,746	48,393	1 74	32 46
Northern Bengal	1,24,365	1,095,802	12,580,743	13,616,545	15,451,505	89,070	1 27	47 19
Tihoot	55,368	448,843	3,710,164	4,159,007	7,005,228	24,494	1 27	69 00
Cawnpore and Farukhabad	69,317	439,068	5,846,693	6,334,761	6,940,230	20,697	1 73	62 81
Bhavnagar-Gondal	93,626	835,901	6,306,240	7,142,141	13,365,782	30,765	1 28	27 56
TOTAL of Narrow Gauge Railways	20,91,148	17,033,595	159,210,849	176,244,444	262,921,009	1,120,061	1 88	32 48
Percentage of Freight and Dead Weight	- - -	9 66	90 34	100 00	-	-	-	-

COST OF WORKING UNITS OF TRAFFIC—COACHING TRAFFIC (HALF-YEAR ENDING 30TH JUNE 1882).

From Statistics compiled in accordance with Public Works Department Circular, No 7, Railway, dated 17th February 1881

RAILWAYS	Coaching Expenses	Gross Ton-Mileage of Coaching Trains			Total Passenger Unit Mileage	Other Coaching Traffic Ton-Mileage	Cost of Hauling a Passenger Unit One Mile	Cost of Hauling other Coaching Traffic per Ton-Mile.
		Freight.	Dead Weight.	TOTAL.				
BROAD GAUGE.								
	<i>Rs</i>	<i>Ton-Miles.</i>	<i>Ton Miles</i>	<i>Ton-Miles</i>	<i>Unit-Miles.</i>	<i>Ton-Miles</i>	<i>Pies</i>	<i>Pies</i>
East Indian - - - - -	17,59,935	28,919,706	304,870,168	333,489,474	415,714,393	3,595,523	0 73	9 37
Great Indian Peninsula - - - - -	11,18,886	13,685,307	173,343,221	187,028,528	193,490,210	1,669,485	1 01	45 67
Sind, Punjab, and Delhi - - - - -	11,06,627	3,697,850	122,763,477	131,461,327	129,640,686	778,851	1 42	36 40
Madras - - - - -	7,76,530	7,300,429	75,660,841	82,961,270	102,801,752	1,012,086	1 28	16 68
Bombay, Baroda, and Central India - - - - -	6,04,471	7,807,123	79,504,675	87,310,698	109,381,842	1,110,678	0 96	10 09
Eastern Bengal - - - - -	3,16,678	2,790,016	29,023,421	31,822,436	41,782,930	249,647	1 38	34 53
Oudh and Rohilkhand - - - - -	4 86,846	5,378,809	56,982,787	64,321,596	81,623,110	451,908	1 07	14 33
Indus Valley - - - - -	3,58,192	3,019,275	52,398,766	55,918,040	43,288,044	384,703	1 42	19 47
Punjab Northern - - - - -	5,24,025	3,246,318	44,317,922	47,667,240	48,980,270	270,301	1 98	13-23
Patna and Gya - - - - -	85,243	706,327	7,646,540	8,262,867	11,193,251	84,797	1 37	30 57
Nizam's - - - - -	90,168	842,955	11,713,800	12,556,664	11,921,491	102,180	1 24	24 20
TOTAL of all Broad Gauge Railways - - - - -	75,28,621	82,366,014	960,324,526	1,042,690,140	1,189,700,679	9,659,689	1 05	20 19
Percentage of Freight and Dead Weight - - - - -	- - -	7 90	92 10	100 00	- - -	- - -	- - -	- - -
TOTAL, excluding East Indian Railway - - - - -	57,68,686	53,446,308	655,754,368	709,200,668	773,986,286	6,064,166	1-21	26 61
Percentage of Freight and Dead Weight - - - - -	- - -	7 54	92 46	100-00	- - -	- - -	- - -	- - -
NARROW GAUGE.								
South Indian - - - - -	4,14,972	4,792,461	30,370,678	35,163,129	75,806,587	199,829	0 95	39 34
Rajputana-Malwa - - - - -	9,90,414	10,447,905	86,249,516	96,287,421	152,540,302	816,711	1 05	18 23
Mysore - - - - -	41,278	293,776	2,091,519	2,385,295	4,467,612	21,059	1 65	20-97
Nagpur and Chhattisgarh - - - - -	35,886	390,807	2,993,748	3,384,555	6,068,660	22,138	1 08	14 42
Rangoon and Irrawaddy Valley - - - - -	1,90,972	1,697,483	16,273,851	17,931,334	27,309,811	47,695	1 21	67-02
Northern Bengal - - - - -	1,31,288	1,140,770	12,423,033	13,569,803	16,626,466	133,868	1 22	37 39
Tirhoot - - - - -	55,400	605,344	4,642,154	5,247,498	9,176,429	49,370	0 97	34 74
Cawnpore and Farukhabad - - - - -	71,035	561,890	6,140,353	6,702,243	8,907,389	25,138	1 46	26 65
Bhavnagar-Gondal - - - - -	90,445	1,199,368	8,013,222	9,212,580	17,708,291	129,980	0 90	10 38
TOTAL of Narrow Gauge Railways - - - - -	10,39,609	20,735,784	169,148,074	189,883,858	318,629,756	1,447,738	1 05	24 66
Percentage of Freight and Dead Weight - - - - -	- - -	10 92	80 98	100 00	- - -	- - -	- - -	- - -

COST OF WORKING UNITS OF TRAFFIC—COACHING TRAFFIC (HALF-YEAR ENDING 31ST DECEMBER 1882)

From Statistics compiled in accordance with Public Works Department Circular, No 7, Railway, dated 17th February 1881

RAILWAYS	Coaching Expenses.	Gross Ton-Mileage of Coaching Trains			Total Passenger Unit Mileage	Other Coaching Traffic Ton-Mileage	Cost of Hauling a Passenger Unit One Mile	Cost of Hauling other Coaching Traffic per Ton
		Freight.	Dead Weight.	TOTAL.				
BROAD GAUGE.								
	<i>Rs</i>	<i>Ton-Miles</i>	<i>Ton-Miles</i>	<i>Ton-Miles</i>	<i>Unit-Miles</i>	<i>Ton-Miles</i>	<i>Pies</i>	<i>Pies</i>
East Indian	20,69,812	28,109,219	345,652,493	373,761,712	363,274,266	5,946,032	0 94	9 18
Great Indian Peninsula	21,26,269	14,416,941	184,093,313	198,510,254	176,139,417	3,440,055	1 63	35 31
Sind, Punjab, and Delhi	9,14,708	8,671,222	103,009,042	111,680,264	104,981,035	2,221,089	1 24	20 25
Madras	7,14,407	7,927,829	71,644,810	79,172,639	103,811,532	1,187,924	1 18	12 04
Bombay, Baroda, and Central India	10,89,119	7,186,497	60,330,429	67,516,925	100,304,358	1,050,186	1 87	20 04
Eastern Bengal	2,60,187	2,767,321	30,116,528	32,883,849	40,495,387	293,425	1 09	19 66
Oudh and Rohilkhand	5,81,982	4,549,266	57,501,709	62,050,975	68,263,449	413,998	1 51	27 09
Indus Valley and Kandahar	2,32,223	2,441,091	40,984,927	49,426,018	38,152,669	422,109	1 61	13 97
Punjab Northern	6,40,524	3,088,406	49,894,021	52,982,427	45,080,718	335,936	2 63	13 17
Patna-Gya	89,329	792,562	7,585,732	8,378,294	12,903,049	16,410	1 25	67 26
Nizam's	1,18,937	816,842	12,050,525	12,867,367	11,693,993	105,106	1 63	35 81
TOTAL of all Broad Gauge Railways	88,87,477	80,367,196	988,863,129	1,069,230,325	1,060,103,873	15,430,665	1 33	17 84
Per-centage of Freight and Dead Weight	- - -	7 52	92 48	100 00	- - -	- - -	- - -	- - -
TOTAL, excluding East Indian Railway	68,27,665	52,257,977	648,210,636	695,468,613	696,829,607	9,484,633	1 54	23 27
Per-centage of Freight and Dead Weight	- - -	7 51	92 49	100 00	- - -	- - -	- - -	- - -
NARROW GAUGE.								
South Indian	4,74,956	4,674,820	35,984,380	40,599,200	73,360,257	143,980	1 11	66 86
Jeypore-Malwa	11,29,711	9,760,120	90,505,115	100,274,235	149,276,618	743,946	1 98	29 96
Mysore	69,988	416,075	2,233,418	2,649,491	6,574,188	26,293	1 55	60 22
Nagpur and Chhattisgarh	74,860	334,819	3,210,670	3,545,489	5,229,907	17,874	2 69	44 86
Rangoon and Irrawaddy Valley	2,30,055	1,419,910	16,110,155	16,529,165	22,684,745	47,574	1 16	68 42
Northern Bengal	1,28,184	1,074,284	12,974,751	14,048,985	15,684,603	118,389	1 24	27 18
Tirhoot	59,892	4,629,261	5,016,914	7,325,918	4,663	1 30	44 79	
Cawnpore and Farukhabad	69,991	457,954	5,187,248	5,645,200	7,266,982	26,003	1 39	70 66
Bhavnagar-Gondal	1,47,783	889,354	7,302,152	8,191,506	14,065,019	40,748	1 87	49 69
TOTAL of Narrow Gauge Railways	23,62,400	19,422,839	170,981,146	196,403,985	301,347,637	1,202,445	1 34	35 61
Per-centage of Freight and Dead Weight	- - -	9 89	90 11	100 00	- - -	- - -	- - -	- - -

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING UNITS OF TRAFFIC—COACHING TRAFFIC (HALF-YEAR ENDING 30TH JUNE 1883.)

From Statistics compiled in accordance with Public Works Department Circular, No 7, Railway, dated 17th February 1881

RAILWAYS	Coaching Expenses	Gross Ton-Mileage of Coaching Trains			Total Passenger Unit Mileage.	Other Coaching Traffic Ton-Mileage.	Cost of Hauling a Passenger Unit One Mile.	Cost of Hauling other Coaching Traffic per Ton.
		Freight	Dead Weight	TOTAL.				
	<i>Rs</i>	<i>Ton-Miles</i>	<i>• Ton-Miles</i>	<i>Ton-Miles</i>	<i>Unit-Miles</i>	<i>Ton-Miles</i>	<i>Pies</i>	<i>Pies</i>
BROAD GAUGE								
East Indian	19,22,970	29,763,512	378,512,240	408,275,752	424,329,718	8,934,485	0-78	9 81
Great Indian Peninsula	16,82,355	15,001,796	201,843,795	217,845,591	198,033,357	2,725,759	1 16	27 23
Sind, Punjab, and Delhi	8,10,727	8,027,864	101,343,287	109,371,141	118,659,663	775,078	1 17	22 19
Madras	6,74,331	7,215,021	67,320,412	74,535,433	104,064,323	872,064	1 13	13 21
Bombay, Baroda, and Central India	5,98,454	8,315,770	82,107,005	90,422,775	116,661,222	1,178,509	0 87	11-08
Eastern Bengal	8,21,490	2,306,239	33,586,000	36,972,239	50,659,890	300,866	1 09	21 53
Oudh and Rohilkhand	4,19,584	4,707,487	55,814,442	60,521,929	71,978,204	351,445	1-04	16 24
Indus Valley and Kandahar	2,26,465	2,885,042	44,214,556	47,099,598	88,947,259	524,269	1-00	8 86
Punjab Northern	6,13,872	3,403,280	50,021,071	53,424,351	46,417,827	456,362	2 45	9 90
Fatna and Gya*	—	—	—	—	—	—	—	—
Nizam's	1,87,751	908,140	12,139,923	13,043,063	11,462,237	197,927	1 87	25 49
TOTAL of all Broad Gauge Railways	73,09,029	83,609,141	1,027,902,715	1,111,811,854	1,183,133,000	11,316,849	1 26	16 51*
Percentage of Freight and Dead Weight	—	7 52	92 48	100 00	—	—	—	—
TOTAL, excluding East Indian Railway	53,86,059	53,845,629	649,390,473	703,286,102	758,803,899	7,381,363	1 31*	17 25*
Percentage of Freight and Dead Weight	—	7 65	92 35	100 00	—	—	—	—
NARROW GAUGE.								
South Indian	5,22,409	5,813,133	41,829,706	47,642,839	93,314,650	174,995	0 95	65 41
Rajputana-Malwa	7,00,196	19,748,916	80,913,536	101,662,452	168,963,702	1,140,680	0 88	11 42
Mysore	58,268	369,841	2,532,017	2,901,858	5,686,471	22,767	1 90	17 67
Nagpur and Chhattisgarh	70,279	564,016	8,583,358	9,097,874	8,710,481	38,192	1 47	19 14
Rangoon and Irrawaddy Valley	2,17,116	1,788,467	18,104,811	19,894,678	28,542,051	63,519	1 34	54-77
Northern Bengal	1,22,476	1,219,861	13,531,466	14,751,347	17,861,262	123,404	1-14	25 13
Tirhoot	78,741	805,231	6,382,480	7,187,720	1,660,530	86,292	1 08	25 39
Cawnpore-Farukhabad	88,819	546,648	6,089,148	6,635,991	8,076,121	24,332	1 29	3 50
Bhavnagar-Gondal	1,19,246	1,084,733	8,787,463	9,872,195	16,173,683	107,171	1 32	14 78
TOTAL of Narrow Gauge Railways	20,46,539	22,942,230	195,704,214	218,646,444	349,643,941	1,797,582	1 26*	26 36*
Percentage of Freight and Dead Weight	—	10-49	89 51	100 00	—	—	—	—

* This line is now worked by the East Indian Railway Company.

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING UNITS OF TRAFFIC—COACHING TRAFFIC

GENERAL ABSTRACT

From Statistics compiled in accordance with Public Works Department Circular, No 7, Railway, dated 17th February 1881

RAILWAYS	Coaching Expenses.	Gross Ton-Mileage of Coaching Trains			Total Passenger Unit Mileage	Other Coaching Traffic Ton-Mileage.	Cost of Hauling a Passenger Unit One Mile.	Cost of Hauling other Coaching Traffic per Ton
		Freight.	Dead Weight	TOTAL.				
ALL BROAD GAUGE RAILWAYS								
	<i>Rs</i>	<i>Ton-Miles.</i>	<i>Ton-Miles</i>	<i>Ton-Miles</i>	<i>Unit-Miles</i>	<i>Ton-Miles</i>	<i>Pies</i>	<i>Pies</i>
First Half of 1881 - - - - -	72,39,265	79,389,914	911,472,279	990,856,193	1,087,771,604	12,596,676	1 09	15 47
Second Half of 1881 - - - - -	76,01,186	68,880,649	896,694,394	965,025,043	977,696,564	9,041,390	1 27	21 69
First Half of 1882 - - - - -	75,28,621	82,366,614	990,324,526	1,042,690,140	1,189,700,679	9,659,689	1 05	20 19
Second Half of 1882 - - - - -	88,87,477	89,367,196	988,603,129	1,069,280,325	1,060,109,873	15,430,665	1 33	17 84
First Half of 1883 - - - - -	73,09,029	83,600,141	1,027,902,713	1,111,511,854	1,188,133,600	11,815,848	1 26	16 61
TOTAL - - -	3,85,65,576	394,056,514	4,785,257,041	5,179,313,555	5,498,406,320	58,047,167	1 19	18 08
Per-centages of Freight and Dead Weight - - -	- - -	7 61	92 39	100 00	-	-	-	-
BROAD GAUGE RAILWAYS, EXCLUDING EAST INDIAN RAILWAY.								
First Half of 1881 - - - - -	59,04,130	55,530,597	648,238,264	703,768,861	758,082,229	8,491,692	1 27	19 49
Second Half of 1881 - - - - -	61,60,732	45,669,716	629,083,210	673,022,925	689,162,136	5,449,299	1 51	30 86
First Half of 1882 - - - - -	57,85,088	53,445,908	635,754,358	700,200,606	773,666,286	6,064,166	1 21	26 61
Second Half of 1882 - - - - -	68,27,666	52,257,977	643,210,636	695,466,613	696,629,607	9,484,698	1 54	23 27
First Half of 1883 - - - - -	53,96,069	53,946,529	649,890,47	703,236,102	758,608,802	7,381,363	1 81	17 25
TOTAL - - -	3,00,47,272	260,950,226	3,224,636,04	3,685,607,167	3,663,864,140	36,862,152	1 36	22 86
Per-centages of Freight and Dead Weight - - -	- - -	7 49	92 51	100 00	-	-	-	-
NARROW GAUGE RAILWAYS.								
First Half of 1881 - - - - -	19,59,416	17,476,763	147,141,971	164,618,734	269,843,206	1,151,117	1 26	30 46
Second Half of 1881 - - - - -	20,91,143	17,083,595	159,210,849	176,344,444	262,921,000	1,120,061	1 38	22 48
First Half of 1882 - - - - -	19,89,809	20,735,784	169,148,074	184,883,858	318,529,759	1,447,738	1 05	24 06
Second Half of 1882 - - - - -	23,62,400	19,422,349	176,981,146	196,403,985	301,847,679	1,202,445	1 84	35 61
First Half of 1883 - - - - -	20,46,539	22,342,230	185,704,214	218,446,444	349,643,941	1,797,582	1 26	26 25
TOTAL - - -	1,03,99,307	97,611,211	648,186,254	945,797,465	1,502,386,549	6,718,943	1 25	29 57
Per-centages of Freight and Dead Weight - - -	- - -	10 32	89 68	100 00	-	-	-	-

[Issue IV—No 3 A]

ABSTRACTS OF STATISTICS OF WORKING INDIAN RAILWAYS.

COST OF WORKING UNITS OF TRAFFIC (GOODS TRAFFIC).—HALF-YEAR ENDING 30TH JUNE 1881

From Statistics compiled in accordance with Public Works Department Circular, No. 7, Railway, dated 17th February 1881

RAILWAYS	Goods Expenses.	Gross Ton-Mileage of Goods Trains.			Average Cost of Hauling One Ton of Freight One Mile	
		Freight.	Dead Weight.	Total.	Working Expenses	Working Expenses with* Interest on Capital
BROAD GAUGE.						
	<i>Rs</i>	<i>Ton-Miles</i>	<i>Ton-Miles.</i>	<i>Ton-Miles</i>	<i>Pces</i>	<i>Pces.</i>
East Indian - - - - -	49,63,609	454,818,125	612,483,336	1,067,301,461	2 09	5 46
Great Indian Peninsula - - - - -	63,00,371	284,239,632	552,271,371	838,511,043	4 29	7 72
Sind, Punjab, and Delhi - - - - -	20,61,448	75,262,027	195,108,634	270,370,661	5 26	10 35
Madras - - - - -	12,38,382	35,058,253	91,815,100	126,873,443	6 78	10 28
Bombay, Baroda, and Central India - - - - -	14,44,826	78,097,365	149,470,066	227,567,431	3 52	7 50
Eastern Bengal - - - - -	5,29,371	19,446,738	32,070,218	62,116,956	5 23	10 38
Oudh and Rohilkhand - - - - -	9,36,788	47,419,976	94,205,823	141,625,799	3 79	7 88
Indus Valley - - - - -	15,19,547	38,693,171	119,797,899	158,490,870	7 54	13 53
Punjab Northern - - - - -	10,11,530	16,169,834	67,664,964	73,834,793	12 01	21 92
Patna and Gya - - - - -	82,062	1 744,856	4,723,673	6,469,629	9 02	13 44
Nizam's - - - - -	3,99,555	4,138,794	10,031,412	14,771,208	5 69	6 45
TOTAL for all Broad Gauge } Lanes - - - - -	2,02,97,989	1,067,690,871	1,920,842,386	2,978,533,257	8 08	7 68
Per-centage of Freight and Dead Weight - - - - -	-	85 51	64 49	100 00	-	-
TOTAL, excluding East } Indian Railway - - - - -	1,63,34,380	602,872,746	1,308,350,050	1,911,231,796	4 89	9 37
Per-centage of Freight and Dead Weight - - - - -	-	81 54	66 46	100 00	-	-
NARROW GAUGE						
South Indian - - - - -	7,75,673	20,984,226	37,807,014	58,791,240	7 09	13 16
Rajputana - - - - -	13,91,510	55,031,103	81,616,658	1 6,647,761	4 85	7 65
Holkar and Sindia-Neemuch - - - - -	4,26,642	8,474,785	16,071,063	26,545,848	9 07	17 97
Nagpur and Chhattisgarh - - - - -	71,162	1 627,507	3,168,717	4,796,224	8 40	15 18
Rangoon and Irrawaddy Valley - - - - -	2,91,961	10,253,838	15,875,110	26,1 8,943	5 47	8 73
Northern Bengal - - - - -	2,59,554	7,709,602	15,700,505	23,461,107	6 47	14 20
Tirhoot - - - - -	78,001	2,185,801	3,800,761	6,076,562	6 85	13 15
Chawnpore and Farukhabad - - - - -	22,749	670,401	1,541,718	2,212,119	6 01	12 45
Bhavnagar-Gondal - - - - -	1,60,899	2,263,623	9,119,472	11,383,093	12 80	19 23
TOTAL for Narrow Gauge } Railways - - - - -	34,68,121	109,191,881	186,851,018	296,042,899	6 03	12 43
Per-centage of Freight and Dead Weight - - - - -	-	36 88	68 12	100 00	-	-

* 5 per cent. for Guaranteed Railways, and State Railways at 4½ per cent. up to end of 1880-81, afterwards at 4 per cent.

[Issue IV.—No. 3 B]

ABSTRACTS OF STATISTICS OF WORKING INDIAN RAILWAYS.

COST OF WORKING UNITS OF TRAFFIC (GOODS TRAFFIC) — HALF-YEAR ENDING
31ST DECEMBER 1881.

[From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881]

RAILWAYS	Goods Expenses	Gross Ton mileage of Goods Trains			Average Cost of Hauling One Ton of Freight One Mile.	
		Freight	Dead Weight	TOTAL	Working Expenses	Working Expenses with* Interest on Capital.
	<i>Rs</i>	<i>Ton Miles</i>	<i>Ton Miles</i>	<i>Ton Miles</i>	<i>Pees</i>	<i>Pees</i>
BROAD GAUGE.						
East Indian - - - - -	58,11,864	509,670,833	664,810,739	1,174,481,572	2 19	5 26
Great Indian Peninsula - - - - -	00,23,093	238,335,797	417,265,466	655,601,263	4 85	8 83
Sind, Punjab, and Delhi - - - - -	20,25,847	58,112,647	165,232,642	223,345,289	6 69	13 08
Madras - - - - -	12,82,293	36,417,670	95,972,813	132,390,283	6 76	16 16
Bombay, Baroda, and Central India	11,63,676	44,434,533	86,902,460	131,336,993	5 05	10 82
Eastern Bengal - - - - -	8,46,178	38,528,853	66,888,426	105,215,279	4 22	7 64
Oudh and Rohilkhand - - - - -	9,18,316	41,417,731	77,484,254	118,851,985	4 26	8 72
Indus Valley - - - - -	13,28,458	54,951,260	128,508,544	183,460,804	4 54	8 39
Punjab Northern - - - - -	7,83,936	12,900,028	44,193,139	57,163,167	11 32	20 98
Patna and Gya - - - - -	81,137	1,000,000	4,840,380	6,514,319	9 31	13 33
Nizam's - - - - -	1,19,824	1,000,000	9,435,981	13,225,096	6 07	12 71
TOTAL for all Broad Gauge Railways - - - - -	2,03,70,642	1,040,292,446	1,761,283,844	2,801,576,090	3 75	7 75
Per-centage of Freight and Dead Weight - - - - -	-	37 13	62 87	100 00	-	-
TOTAL, excluding East Indian Railways - - - - -	1,45,58,778	530,021,613	1,006,472,905	1,627,094,518	5 26	10 15
Per-centage of Freight and Dead Weight - - - - -	-	32 61	67 39	100 00	-	-
NARROW GAUGE.						
South Indian - - - - -	7,12,060	19,691,520	37,373,347	57,064,867	6 93	13 46
Rajputana - - - - -	14,82,912	52,464,574	99,785,326	143,249,900	5 46	8 09
Huikar and Sindia Neemuch - - - - -	8,32,712	7,737,012	16,138,122	23,875,134	8 26	10 78
Nagpur and Chhattisgarh - - - - -	73,108	1,079,268	2,588,836	3,668,104	13 01	29 31
Rangoon and Irrawady Valley - - - - -	1,89,875	4,383,586	7,534,731	11,918,317	8 32	11 07
Northern Bengal - - - - -	2,85,003	9,791,844	21,415,170	31,207,014	5 69	11 33
Turkoot - - - - -	74,578	2,044,938	3,556,661	5,601,619	7 00	14 37
Cawnpore and Farukhabad - - - - -	49,197	1,579,348	2,810,743	4,489,192	6 62	8 61
Bhavnagar-Gondal - - - - -	1,20,418	3,121,947	6,445,339	9,567,284	7 91	12 69
TOTAL for Narrow Gauge Railways - - - - -	33,36,763	101,994,086	189,254,595	291,249,631	6 15	10 72
Per-centage of Freight and Dead Weight - - - - -	-	35 03	64 98	100 00	-	-

* 5 per cent. for Guaranteed Railways, and State Railways at 4½ per cent. up to end of 1980-81, afterwards at 4 per cent

[Issue IV.—No 3 C]

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS.

COST OF WORKING UNITS OF TRAFFIC (GOODS TRAFFIC) — HALF-YEAR ENDING 30TH JUNE 1882.

[From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881]

RAILWAYS.	Goods Expenses	Gross Ton Mileage of Goods Trains.			Average Cost of Hauling One Ton of Freight One Mile	
		Freight	Dead Weight	TOTAL	Working Expenses.	Working Expenses with* Interest on Capital.
BROAD GAUGE.						
East Indian - - - - -	Rs 63,64,890	Ton Miles 521,392,406	Ton Miles. 684,698,492	Ton Miles 1,206,090,998	Pies 2 34	Pies 5 28
Great Indian Peninsula - - - - -	75,27,932	357,278,058	635,018,419	992,296,477	4 05	6 07
Sind, Punjab, and Delha - - - - -	21,11,048	69,479,921	182,180,569	251,660,490	5 83	11 31
Madras - - - - -	13,96,348	43,392,760	105,847,320	149,180,070	6 19	14 33
Bombay, Baroda, and Central India - - - - -	18,65,047	89,618,724	153,771,898	243,390,622	3 61	7 00
Eastern Bengal - - - - -	6,17,768	22,911,771	39,186,048	62,097,819	5 17	9 33
Oudh and Rohilkhand - - - - -	12,11,830	58,380,370	101,849,977	160,230,347	0 99	4 46
Indus Valley - - - - -	11,94,924	51,664,731	134,767,192	186,431,923	4 44	9 07
Punjab Northern - - - - -	7,75,083	16,933,275	63,342,685	70,275,960	8 78	16 79
Patna and Gya - - - - -	73,820	3,406,442	5,120,435	7,146,877	6 99	10 46
Nizam's - - - - -	1,19,795	2,200,000	12,104,907	16,678,665	5 08	10 91
TOTAL for all Broad Gauge Railways	2,30,79,383	1,237,562,296	2,107,885,942	3,345,448,238	3 56	6 98
Per-centage of Freight and Dead Weight - - - - -	- -	87 00	63 00	100 00	-	-
TOTAL, excluding East Indian Railway	1,67,14,498	716,178,800	1,423,187,450	2,139,387,250	4 48	8 14
Per-centage of Freight and Dead Weight - - - - -	- -	33 47	66 53	100 00	-	-
NARROW GAUGE.						
South Indian - - - - -	7,00,852	19,846,322	39,998,758	59,345,080	6 95	13 58
Rajputana-Malwa - - - - -	19,53,311	77,853,852	128,923,382	206,777,234	4 82	7 91
Mysore - - - - -	22,726	625,681	687,573	1,313,254	6 97	15 84
Nagpur and Chhattisgarh - - - - -	1,55,536	4,467,088	10,202,710	14,669,798	6 69	12 37
Rangoon and Irrawaddy Valley - - - - -	2,92,730	10,304,465	17,311,711	27,616,176	5 45	8 37
Northern Bengal - - - - -	3,96,558	10,046,140	21,661,153	31,707,293	5 88	11 50
Tirhoot - - - - -	97,859	3,313,273	5,956,010	9,269,283	5 67	12 56
Cawnpore and Farakhabad - - - - -	57,500	1,966,015	3,455,442	5,421,457	5 06	7 48
Bhavnagar-Gondal - - - - -	1,74,841	5,943,334	11,855,669	17,809,008	5 56	9 04
TOTAL for Narrow Gauge Railways	37,61,508	133,863,170	240,062,408	373,928,578	5 36	9 37
Per-centage of Freight and Dead Weight - - - - -	- -	35 79	64 21	100 00	-	-

* 5 per cent for Guaranteed Railways, and State Railways at 4½ per cent. up to end of 1880-81, afterwards at 4 per cent.

[Issue IV.—No. 3 D]

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING UNITS OF TRAFFIC (GOODS TRAFFIC)—HALF-YEAR ENDING
31st DECEMBER 1882

[From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881]

RAILWAYS	Goods Expenses	Gross Ton Mileage of Goods Trains.			Average Cost of Hauling One Ton of Freight One Mile.	
		Freight.	Dead Weight.	TOTAL.	Working Expenses	Working Expenses with* Interest on Capital.
BROAD GAUGE.						
East Indian Railway - - - -	Rs 61,03,223	Ton Miles 482,046,581	Ton Miles 661,700,192	Ton Miles 1,143,746,773	Pies 2 51	Pies 5 12
Great Indian Peninsula - - -	56,73,636	187,760,662	341,934,741	529,695,393	5 80	10 59
Sind, Punjab, and Delhi - - -	18,90,560	69,619,996	161,204,660	230,824,656	5 21	10 61
Madras - - - - -	13,20,400	39,577,427	106,653,237	146,230,664	6 39	15 34
Bombay, Baroda, and Central India	16,50,485	45,756,117	86,838,619	132,594,736	6 82	12 58
Eastern Bengal - - - - -	9,09,830	40,621,240	74,467,372	114,988,612	4 31	7 46
Oudh and Rohilkhand - - - -	9,46,369	35,277,677	65,632,478	100,910,055	5 15	10 57
Indus Valley and Kandahar - - -	13,15,593	70,965,078	151,868,931	222,833,409	3 57	8 07
Punjab Northern - - - - -	5,70,640	11,514,759	26,688,978	47,801,747	9 51	21 90
Patna and Gya - - - - -	76,205	66,4308	5,466,243	7,147,361	8 70	13 93
Nizam's - - - - -	1,35,607	2,011,367	10,648,666	14,659,932	0 48	14 28
TOTAL for all Broad Gauge Railways	2,07,92,658	988,569,912	1,702,103,416	2,690,678,328	4 03	8 04
Per-centage of Freight and Dead Weight - - - - -	-	36 75	63 25	100 00	-	-
TOTAL, excluding East Indian Railway	1,44,89,435	506,523,331	1,040,403,224	1,546,926,555	5 49	10 83
Per centage of Freight and Dead Weight - - - - -	-	32 74	67 26	100 00	-	-
NARROW GAUGE.						
South Indian - - - - -	7,16,821	20 090,647	41,047,216	61,137,863	6 85	13 37
Rajputana-Malwa - - - - -	16,69,146	52,953,864	95,201,310	148,155,174	6 05	11 03
Mysore - - - - -	57 886	638,922	1,917,695	2,556 617	17 40	33 85
Nagpur and Chhattisgarh - - - -	1,42,941	2,067,364	4,702,137	6,769,501	13 28	27 09
Rangoon and Irrawaddy Valley - -	2,09,057	4,019,023	8,584,015	13,203,038	8 69	15 20
Northern Bengal - - - - -	3,28,463	11,058,774	26,808,159	36,866,934	6 70	11 61
Tirhoot - - - - -	1,11,299	3,526,662	5,794,447	9,321,109	6 06	12 67
Cawnpore and Farakhabad - - - -	48,799	1,478,849	3,108,306	4,587 155	6 34	11 01
Bhavnagar-Gondal - - - - -	84,595	1,402,640	3,657,341	5,259,931	12 99	24 60
TOTAL for Narrow Gauge Railways	33,79,297	97,836,745	190,022,626	287,859,371	6 62	12 51
Per-centage of Freight and Dead Weight - - - - -	-	33 99	66 01	100 00	-	-

* 5 per cent for Gastrated Railways, and 3 and Railways at 4½ per cent, up to end of 1880-81, afterwards at 4 per cent

[Issue IV.—No 3 E]

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS.

COST OF WORKING UNITS OF TRAFFIC (GOODS TRAFFIC)—HALF YEAR ENDING 30TH JUNE 1883.

[From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881]

RAILWAYS	Goods Expenses.	Gross Ton Mileage of Goods Trains.			Average Cost of Hauling One Ton of Freight One Mile	
		Freight.	Dead Weight	TOTAL.	Working Expenses.	Working Expenses with* Interest on Capital
BROAD GAUGE						
East Indian - - - - -	Rs 60,28,335	Ton Miles. 624 013,080	Ton Miles 840,978,020	Ton Miles 1,470,991,100	Ptes 2 13	Ptes 4 31
Great Indian Peninsula - - - - -	75,48,709	390 776,452	648,467,712	1,039,244,164	3 71	6 34
Sind, Punjab, and Delhi - - - - -	26,70,187	114,374,680	245,846,086	360,221,366	4 48	8 23
Madras - - - - -	13,72,841	41 450,839	110,292,623	161,743,462	6 76	15 22
Bombay Baroda, and Central India - - - - -	20 28,292	109,908,782	190,041,436	305,951,218	3 54	6 53
Eastern Bengal - - - - -	6,98,789	28,984,108	51,776,095	80,360,293	4 63	8 54
Oudh and Rohilkhand - - - - -	10,08,680	55,756,329	89,789,172	145,495,501	3 47	7 23
Indus Valley - - - - -	15,98,790	114,064,329	217,503,667	332 467,986	2 67	5 51
Punjab Northern - - - - -	6,03,463	12,138,015	40,380,376	52,518,391	9 54	24 00
Patna and Gya† - - - - -	—	—	—	—	—	—
Nizam's - - - - -	1,03,697	4,677,131	10,822,751	15,499,882	6 72	13 54
TOTAL for all Broad Gauge Lines - - - - -	2,46,21,760	1,307,044,745	2,457,448, 518	3,954,493,273	3 16	9 20
Per-centage of Freight and Dead Weight - - - - -	- -	37 86	62 14	100 00	—	—
TOTAL, excluding East Indian Railway - - - - -	1,76,93,434	873,031,605	1,610,470,508	2,483,602,173	3 89	7 34
Per-centage of Freight and Dead Weight - - - - -	- -	35 15	64 85	100 00	—	—
NARROW GAUGE.						
South Indian - - - - -	6,84 792	20,772,095	41,874,358	62,446,393	6 33	12 27
Rajputana-Malwa - - - - -	24,72,067	117,734,019	196,727,744	314,461,763	4 03	7 01
Mysore - - - - -	53,805	807,697	1,972,338	2,680,035	12 79	26 06
Nagpur and Chhattisgarh - - - - -	2,04,753	16,138,857	29,030,860	39,154,717	3 51	5 77
Rangoon and Irrawaddy Valley - - - - -	3,16,317	10,453,193	18,531,514	28,984,707	5 81	9 39
Northern Bengal - - - - -	3,48,208	12,918,258	29,021,278	41,939,536	5 18	10 40
Tirhoot - - - - -	1,39,084	4 480,512	10,123,221	14,603,733	6 80	15 27
Cawnpore and Farakhabad - - - - -	54,933	2,052,540	3,218,041	5 265,690	5 14	8 75
Bhavnagar-Gondal - - - - -	1,80,586	4,539,371	10,611,066	14,950,437	7 99	13 87
TOTAL for Narrow Gauge Railways - - - - -	45,65,405	169,631,491	333,505,420	523,486,911	4 02	12 21
Per centage of Freight and Dead Weight - - - - -	- -	36 23	63 77	100 00	—	—

* 5 per cent. for Guaranteed Railways, and State Railways at 4½ per cent., up to end of 1880-81, afterwards at 4 per cent.

† The working of the line has been made over to the East Indian Railway Company from 1st January 1883

[Issue IV.—No 3 F.]

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS.

COST OF WORKING UNITS OF TRAFFIC (GOODS TRAFFIC) —GENERAL ABSTRACT

[From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881]

	Goods Expenses.	Gross Ton Mileage of Goods Trains.			Average Cost of Hauling One Ton of Freight One Mile	
		Freight	Dead Weight	TOTAL	Working Expenses	Working Expenses with* Interest on Capital
ALL BROAD GAUGE RAILWAYS						
First Half of 1881 - - - - -	Rs 2,02,97,069	Ton Miles. 1,057,690,871	Ton Miles. 1,920,842,386	Ton Miles. 2,978,533,257	Pees 3 68	Pees. 7 68
Second Half of 1881 - - - - -	2,03,70,642	1,040,292,446	1,761,283,644	2,801,576,090	3 75	7 75
First Half of 1882 - - - - -	2,30,79,388	1,237,562,296	2,107,885,942	3,345,448,238	3 58	6 33
Second Half of 1882 - - - - -	2,07,92,668	988,569,912	1,702,103,416	2,690,673,328	4 03	8 04
First Half of 1883 - - - - -	2,46,21,769	1,497,044,745	2,457,448,528	3,954,493,273	3 16	9 20
TOTAL - - - - -	10,91,62,441	6,821,100,270	9,949,562,916	15,770,724,186	3 60	7 98
Per-centage of Freight and Dead Weight - - - - -	- -	36 91	63 09	100 00	-	-
BROAD GAUGE RAILWAYS, EXCLUDING EAST INDIAN RAILWAY.						
First Half of 1881 - - - - -	1,53,34,380	602,872,746	1,308,359,050	1,911,231,796	4 88	9 37
Second Half of 1881 - - - - -	1,45,58,778	530 621,613	1,096,472,908	1,627,094,518	5 26	10 15
First Half of 1882 - - - - -	1,67,14,498	716,179,800	1,423,187,450	2,139,367,250	4 48	8 14
Second Half of 1882 - - - - -	1,44,89,435	566 523,331	1,040,403,224	1,546,920,555	5 49	10 83
First Half of 1883 - - - - -	1,76,93,434	873,031,685	1,610,470,508	2,483,502,173	3 89	7 34
TOTAL - - - - -	7,87,90,520	3,229,229,155	6,478,893,137	9,708,122,292	4 68	8 90
Per-centage of Freight and Dead Weight - - - - -	- -	33 26	66 74	100 00	-	-
NARROW GAUGE RAILWAYS.						
First Half of 1881 - - - - -	34,68,121	109,191,881	185,851,018	296,042,899	6 09	12 43
Second Half of 1881 - - - - -	33,36,763	101,994,036	189,254,595	291,248,631	6 15	10 72
First Half of 1882 - - - - -	37,61,508	138,860,170	240,062 408	373,928,578	5 39	9 37
Second Half of 1882 - - - - -	38,79,297	97,836,745	190,022,628	287,859,371	6 62	12 51
First Half of 1883 - - - - -	45,65,405	189,681,491	333,805,420	523,486,911	4 62	12 21
TOTAL - - - - -	1,85,10 094	632,570,323	1,139,996,067	1,772,566,390	5 62	11 45
Per-centage of Freight and Dead Weight - - - - -	- -	35 09	64 31	100 00	-	-

* 5 per cent. for Guaranteed Railways, and State Railways at 4½ per cent., up to end of 1880-81, afterwards at 4 per cent.

Calcutta, 6 March 1884

R. A. Sargeant, Major, R.E.,
Under Secretary to Government of India,
Public Works Department, Railway Branch

ABSTRACT STATISTICS OF WORKING INDIAN RAILWAYS

CARRYING CAPACITY (COACHING TRAFFIC).—HALF-YEAR ENDING 30TH JUNE 1881.

[From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881.]

RAILWAYS.	Coaching Train-Miles run	Vehicle Mileage.	Average Number of Vehicles in a Train	Gross Ton-Mileage of all Coaching Trains.			Average Weight of Coaching Trains.			Passenger Unit Mileage	Other Traffic Ton-Mileage.	Average Number of Units in a Train		
				Freight.	Dead Weight	TOTAL.	Freight.	Dead Weight.	TOTAL.			Passenger Units.	Other Coaching Traffic.	
														Ton Miles
BROAD GAUGE														
	<i>No</i>	<i>Vehicle Miles</i>	<i>No.</i>	<i>Ton Miles</i>	<i>Ton Miles</i>	<i>Ton Miles</i>	<i>Tons</i>	<i>Tons</i>	<i>Tons</i>	<i>Unit Miles</i>	<i>Ton Miles.</i>	<i>No</i>	<i>Tons</i>	
East Indian	1,276,517	24,498,308	19 10	28,853,817	263,234,015	287,087,382	18 06	205*89	224 55	322,689,375	4,104,683	262 39	3 21	
Great Indian Peninsula	1,102,948	17,177,138	16 87	15,667,016	170,391,998	184,049,014	12 38	154 49	168 87	180,886,765	2,285,924	163 55	2 08	
Sind, Punjab, and Delhi	638,318	11,700,224	18*33	9,031,924	123,134,656	133,766,582	15*09	202 30	217 39	130,406,143	1,656,076	204 30	2 66	
Madras	469,714	6,692,473	14 25	7,121,800	76,032,647	82,154,447	15 16	159 74	174 90	100,442,762	993,449	213 84	2 12	
Bombay, Baroda, and Central India	364,463	6,401,732	17 57	7,911,437	69,366,107	77,277,544	21 71	190*31	212 02	109,210,596	1,209,410	299 66	3 32	
Eastern Bengal	162,395	2,790,542	18 31	2,925,663	29,363,028	32,178,691	18 54	192 61	211 15	199 824	198 824	282 90	1 30	
Oudh and Rohilkhand	225,866	5,402,218	29*91	4,896,701	55,121,853	60,008,554	21 63	244 01	265*64	75,877,355	300,049	635 89	1 37	
Indus Valley	231,488	6,765,203	24 69	4,680,852	60,689,546	65,370,398	20 05	259*92	279 97	62,812,063	1,453,360	226 36	6 22	
Punjab Northern	259,021	3,585,787	13 84	3,467,024	41,873,630	45,340,654	13 39	161 66	175 05	52,650,207	280,667	293 26	1 08	
Patna-Gya	27,317	573,997	21 01	585,295	5,757,531	6,342,826	21 42	210 77	232*19	3,482,174	14,025	847 11	0 51	
Nizam's	87,273	1,135,787	19 83	762,885	11,525,266	12,288,151	13 32	201 23	214 55	10,660,024	109,700	186 12	1 92	
TOTAL of all Broad Gauge Railways	4,809,335	86,723,419	17*89	79,383,914	911,472,279	990,856,193	16 50	189 52	206 02	1,087,771,604	12,506,575	226 18	2 62	
TOTAL, excluding East Indian Railway	3,530,818	61,225,111	17 34	55,530,597	648,238,264	703,768,861	15 72	183 59	199 32	765,082,229	8,491,692	216 69	2 40	
NARROW GAUGE.														
South Indian	232,607	4,890,780	21 02	4,616,090	30,687,136	35,504,216	20 70	181 93	152*63	76,604,052	190,452	329 33	0 82	
Rajputana	515,182	8,909,796	17 29	5,690,361	57,582,039	63,272,400	11*05	111 77	122*82	85,731,082	498,152	166*41	0 07	
Holkar and Sindia-Neemuch	189,462	2,995,784	20*91	1,993,023	15,652,500	17,647,523	14*41	112 32	126 73	29,812,823	185,376	316 03	1 34	
Nagpur and Chhattisgarh	15,081	636,189	22 29	231,660	1,733,790	1,965,450	15 36	114 97	130 33	3,722,074	5,809	246 81	0 38	
Rangoon and Irrawaddy Valley	112,788	2,665,431	22 55	1,769,029	14,992,714	16,761,743	15 64	131 76	147 30	28,014 0*99	74,982	246 20	0*66	
Northern Bengal	92,480	1,776,128	19 19	1,053,201	11,373,531	12,427,132	11 39	122 99	134 38	15,562,412	103,692	168 17	1 12	
Tirhoot	31,071	631,288	20 32	632,462	3,776,267	4,308,729	17 14	121 53	138 67	3,349,182	27,291	268*71	0*88	
Cawnpore and Farukhabad	45,629	804,453	17 81	413,185	4,618,709	4,937,894	9*19	99*03	108 22	6,683,610	16,624	146 60	0*36	
Bhavnagar-Gondal	46,365	1,244,504	25 73	999,762	6,924,865	7,894,617	20 06	143 17	163 23	15,367,322	48,939	315 67	1*01	
TOTAL of Narrow Gauge Railways	1,232,665	24,063,418	19 51	17,476,768	147,141,971	164,618,734	14 16	119,37	133 54	269,843,206	1,161,117	218*91	0*99	

ABSTRACT STATISTICS OF WORKING INDIAN RAILWAYS

CARRYING CAPACITY (COACHING TRAFFIC).—HALF-YEAR ENDING 31ST DECEMBER 1881.

[From Statistics compiled in accordance with Public Works Department Circular, No. 7 Railway, dated 17th February 1881.]

RAILWAYS	Coaching Train-Miles run.	Vehicle Mileage.	Average Number of Vehicles in a Train.	Gross Ton Mileage of all Coaching Trains.			Average Weight of Coaching Trains.			Passenger Unit Mileage.	Other Traffic Ton Mileage.	Average Number of Units in a Train.	
				Freight.	Dead Weight.	TOTAL.	Freight.	Dead Weight.	TOTAL.			Passenger Units.	Other Coaching Traffic.
BROAD GAUGE													
East Indian	1,302,724	24,791,659	19 03	22,460,934	268,631,184	291,092,118	17 24	206 21	22 45	208,554,428	3,604,092	236 84	2 77
Great Indian Peninsula	1,17,971	17,360,420	14 76	10,843,185	161,124,459	171,967,844	9 22	137 03	146 25	162,402,984	1,398,637	130 03	1 19
Sind, Punjab and Delhi	681 696	11,084,686	19 06	7,207,619	117,886,010	125,093,929	12 39	202 70	215 09	102,406,501	920,646	176 07	1 58
Madras	450,086	8,487,919	14 23	6,099,718	73,116,027	79,215,745	14 47	160 31	174 78	96,080,810	737,667	210 69	1 62
Bombay, Baroda, and Central India	414,970	6,838,918	16 63	7,072 02	76,186,636	84,458,668	17 04	184 08	201 12	93,450,930	988,807	239 66	2 38
Eastern Bengal	154,205	2,446,718	17 16	2,967,663	27, 37,547	30,695,210	19 18	179 87	199 05	43,096,738	273,678	236 31	1 71
Oudh and Rohilkhand	232 213	5,624,384	24 22	4,394,642	68,490 001	62,884,793	18 93	251 88	270 81	68,293,022	257 301	294 53	1 11
Indus Valley	268,832	4,964,643	19 18	3,040,861	55,366,597	58,406,968	11 75	213 91	225 68	40,487,286	676,667	156 46	2 23
Punjab Northern	239,972	3,485,628	14 64	2,856,413	40,904,077	43,760,490	11 90	170 45	162 35	43,801,562	203,491	182 53	0 85
Patna-Gya	30,129	583,830	19 70	714,896	6,068 502	6,783,397	23 78	201 42	225 16	11,003,007	169,092	385 11	0 63
Nizam's	68,846	1,098,638	18 07	68 1,187	10,983,264	11,666,451	11 61	186 64	198 25	10,019,346	67,798	170 26	1 15
TOTAL of all Broad Gauge Railways	4,905,446	84,396,517	17 32	68,130,049	896,694,394	965,025,043	13 93	182 70	196 72	977,696,564	9,044,890	199 31	1 84
TOTAL, excluding East Indian Railway	3,602,722	60,204,858	16 71	45,869,715	628,063,210	673,932,026	12 73	174 33	187 06	669,162,136	5,440,298	185 74	1 51
NARROW GAUGE.													
South Indian	238,079	4,910,282	20 62	4,536,228	32,119,011	36,655,839	19 06	134 91	153 96	73,080,117	124,722	306 95	0 62
Rajputana	674,942	10,286,766	17 89	6,158,676	65,792,975	71,948,651	10 71	114 43	121 74	91,769,185	593,165	159 61	1 03
Holkar and Sindia-Nesmouch	165,747	3,186,511	19 10	2,025,397	19,075,967	21,101,334	12 22	115 09	127 31	30,467,601	182,623	183 82	1 20
Nagpur and Chhattisgarh	15,785	318,384	19 65	231,066	1,732,444	1,963,510	14 64	109 75	124 89	3,704,675	6,330	234 60	0 40
Rangoon and Irrawaddy Valley	90,123	2,016,763	22 97	1,925,044	11,987,812	13,322,656	13 78	124 82	138 06	21,136,746	46,396	219 89	0 60
Northern Bengal	102,004	1,955,985	19 47	1,035,802	12,580,743	13,616,545	10 16	123 34	133 49	16,451,506	89 070	151 48	0 87
Tirhoot	34,243	589,486	17 21	448,843	3,710,164	4,169,007	13 11	108 36	121 40	7,005,228	24,484	204 57	0 72
Cawnpore and Farukhabad	42,663	1,060,786	24 68	439,068	5,895,893	6,334,761	10 81	138 62	148 63	6,940,230	20,637	163 05	0 48
Bhavnagar-Gondal	54,814	1,064,062	19 23	835,901	6,306,240	7,142,141	16 25	116 05	130 30	13,365,782	30,765	243 84	0 66
TOTAL of Narrow Gauge Railways	1,324,300	26,371,014	19 15	17,063,695	169,210,949	176,244,444	12 86	120 22	133 06	262,921,009	1,120,061	196 63	0 84

ABSTRACT STATISTICS OF WORKING INDIAN RAILWAYS.

CARRYING CAPACITY (COACHING TRAFFIC)—HALF-YEAR ENDING 30TH JUNE 1882.

[From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881.]

RAILWAYS	Coaching Train-Miles run	Vehicle Mileage.	Average Number of Vehicles in a Train	Gross Ton-Mileage of all Coaching Trains			Average Weight of Coaching Trains.			Passenger Unit Miles.	Other Traffic Ton-Miles	Average Number of Units in a Train	
				Freight.	Dead Weight.	TOTAL.	Freight.	Dead Weight.	TOTAL.			Passenger Units	Other Coaching Traffic.
BROAD GAUGE.													
East Indian	1,390,883	27,944,175	20 09	28,913,308	304,570,169	333,489,474	20 79	219 01	239 80	415,714,393	3,695,523	298 93	2 59
Great Indian Peninsula	1,280,500	14,024,637	14 64	14,685,907	173,343,221	187,024,528	11 12	140 87	151 99	193,490,210	1,669,085	167 25	1 30
Sind, Punjab and Delhi	569,185	11,437,204	19 41	8,697,850	122,763,477	131,461,327	14 76	208 36	223 12	129,630,686	778,851	220 02	1 32
Madras	460,686	6,826,265	14 82	7,300,429	75,660,841	82,961,270	15 84	164 24	180 08	102,801,752	1,012,086	223 15	2 20
Bombay, Baroda, and Central India	410,856	6,978,959	16 97	7,807,123	79,503,575	87,310,698	19 00	193 51	212 51	104,381,842	1,110,578	268 23	2 70
Eastern Bengal	154,457	2,832,737	18 34	2,789,015	29,023,421	31,822,436	18 12	187 90	206 02	41,732,930	249,947	270 19	1 62
Oudh and Rohilkhand	242,770	5,669,498	23 43	5,338 809	58,982,787	64,321,596	22 19	242 96	265 15	81,625,110	451,998	346 22	1 86
Indus Valley	240,263	4,595,328	19 12	8,018,275	52,898,765	55,918,040	12 57	220 15	232 72	48,258,044	384,703	180 15	1 60
Punjab, Northern	259,242	3,680,167	13 81	3,243,318	44,317,922	47,667,240	12 53	170 95	183 48	48,980,970	270,501	188 93	1 04
Patna and Gaya	40 186	770,361	19 16	706,327	7,546,540	8,252,867	17 58	187 79	205 37	11,133,251	34,737	277 04	0 86
Nizam's	63,221	1,136,637	16 66	642,3-5	11,713,809	12,556,664	12 38	171 70	184 06	11,921,491	102,150	174 74	1 50
TOTAL of all Broad Gauge Railways	5,087,069	89,811,118	17 65	82,365,614	990,324,526	1,042,690,140	16 19	188 78	204 97	1,189,700,679	9,650,889	233 86	1 89
TOTAL, excluding East Indian Railway	3,696,386	61,866,941	16 73	53,446,308	655,754,358	709,200,666	14 46	177 40	191 86	773,986,288	6,064,166	209 39	1 64
NARROW GAUGE.													
South Indian	236,491	4,398,463	18 60	4,792,451	30,370,678	35,163,129	20 26	128 42	148 69	75,896,567	199,829	320 93	0 84
Rajputana-Malwa	790,981	14,924,892	18 87	10,047 905	86,239,516	96,287,421	12 70	109 03	121 73	152,550 302	816,711	192 06	1 03
Mysore	27,836	20,996	9 58	293,776	2,091,619	2,385,295	10 55	75 14	85 69	4,467 81 2	21,059	160 50	0 76
Nagpur Chhattisgarh	23,931	525,876	20 28	390 807	2,993,748	3,384 555	15 07	115 45	130 52	6,086,669	22,188	234 73	0 86
Rangoon and Irrawaddy Valley	126,164	2,752,998	21 82	1,697,481	16,238,851	17,931,334	13 45	128 65	142 10	27,309 811	49,695	116 43	0 79
Northern Bengal	109,414	1,938,494	17 72	1,148,770	12,423,033	13,569,803	10 48	13 54	124 02	16,526,466	133,668	251 04	1 22
Tirhoot	47 952	7 5,792	13 34	605,744	4,642,154	5,247,498	12 62	96 81	109 43	8,176,423	49,370	141 36	1 03
Cawnpore and Farukhabad	38,944	1,126,918	29 03	561,390	6,140,354	6 702,243	14 43	187 67	17 10	8,907,396	25 138	228 72	0 84
Bharwagar Gondal	70,035	1,339,211	19 12	1,189,359	8,013,222	9,212,580	17 13	114 42	131 55	17,706,291	129,980	252 65	1 86
TOTAL of all Narrow Gauge Railways	1,473,768	27,763,610	18 84	20,735,784	169,148,074	189,883,658	14 07	114 77	128 84	318,029 756	1,447,738	216 20	0 98

ABSTRACT STATISTICS OF WORKING INDIAN RAILWAYS.

CARRYING CAPACITY (COACHING TRAFFIC)—HALF-YEAR ENDING 31ST DECEMBER 1882.

From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881

RAILWAYS	Coaching Train-Miles Run	Vehicle Mileage.	Average Number of Vehicles in a Train.	Gross Ton-Mileage of all Coaching Trains			Average Weight of Coaching Trains			Passenger Unit-Mileage	Other Traffic Ton Mileage	Average Number of Units in a Train	
				Freight.	Dead Weight.	TOTAL	Freight.	Dead Weight.	TOTAL.			Passenger Units.	Other Coaching Traffic.
BROAD GAUGE.													
East Indian	1,612,893	31,175,003	19 32	28,109,219	345,652,493	373,761,712	17 32	214 81	231 73	363,274,266	5,946,032	225 23	3 69
Great Indian Peninsula	2,318,797	19,077 335	14 49	14,416,941	184,099,313	199,510,254	10 93	139 59	150 62	176,139,417	3,440,055	133 66	2 61
Sind, Punjab, and Delhi	560,748	8,995,673	16 04	8,671,222	103,009,042	111,680,264	16 46	183 70	199 16	104,981,035	2,221,089	187 22	3 96
Madras	428,507	6,563,488	15 32	7,597,829	71,644,810	79,172,639	17 57	167 19	184 76	108,511,532	1,187,324	242 26	2 77
Bombay, Baroda, and Central India	429,267	6 986,087	16 00	7,186,497	80,330,429	87,516,926	16 74	187 13	203 87	100,304,358	1,050,186	233 66	2 45
Eastern Bengal	161,888	2,903,908	17 81	2,767,821	32,883,849	36,651,670	17 09	186 03	203 12	40,436,387	293,425	250 14	1 81
Oudh and Rohilkhand	256,686	5,399,993	21 05	4,549,266	67,501,309	62,050,575	17 73	224 10	241 83	68,265,419	413,893	266 05	1 61
Indus Valley and Kandahar	203,197	4,141,454	20 56	2,441,091	46,984,927	49,426,018	12 01	231 23	248 24	33,162,669	422,109	169 16	2 08
Punjab Northern	269,705	3,949,116	14 38	3,008,006	49,994,021	52,992,427	11 45	185 00	196 45	45,080,718	335,936	167 15	1 25
Patna and Gya	41,745	770,131	18 45	792,562	7,865,732	8,378,294	18 99	181 71	200 70	12,906,049	15,410	808 14	0 37
Nizam's	76,481	1,131,119	14 77	816,842	12,060,525	12,877,367	10 08	167 66	168 24	11,693,993	105,100	152-90	1 37
TOTAL of all Broad Gauge Railways	5,369,814	90,955,297	16 97	80,367,196	988,863,129	1,069,230,325	14 99	184 49	199 49	1,060,103,873	16,480,665	197 78	2 88
TOTAL, excluding East Indian Railway	3,746,921	59,780,294	15 95	52,257,977	643,210,636	695,468,613	13 94	171 86	186 61	686,829,607	8,484,633	185 97	2 53
NARROW GAUGE.													
South Indian	816,543	4,831,829	15 26	4,674,820	35,934,380	40,509,200	14 45	113 62	127 97	73,350,267	143,990	231 72	0 46
Rajputana-Malwa	806,410	15,076,867	18 70	9,769,120	90,506,115	100,274,235	12 12	112 28	124 36	149,276,618	743,946	186 11	0 92
Mysore	24,825	323,237	13 02	416,076	2,233,416	2,649,491	16 76	89 97	106 78	6,574,188	26,293	264 82	1 08
Nagpur and Chhattisgarh	80,744	594,029	17 37	354,619	3,210,670	3,565,289	10 88	104 43	115 31	5,229,907	17,874	170 11	0 58
Rangoon and Irrawaddy Valley	106,300	2,186,294	20 86	1,419,010	15,110,155	16,529,165	13 35	123 33	136 68	22,684,746	47,674	219 40	0 45
Northern Bengal	116,099	2,091,086	17 49	1,074,234	12,974,751	14,048,985	9 25	111 70	121 04	15,584,603	116,389	134 23	1 02
Tirhoot	40,168	717,524	15 44	487,653	4,529,261	5,016,914	10 66	98 13	108 69	7,326,918	43,603	158 70	0 95
Cawnpore-Farakhabad	39,191	913,451	2 30	457,954	5,181,246	5,639,200	11 69	132 20	143 89	7,266,982	20,003	185 4	0 51
Bhavnsagar Gondal	66,915	1,181,723	17 65	879,359	7,302,162	8,191,606	13 29	109 13	122 42	14,055,019	40,743	210 43	0 61
TOTAL of Narrow Gauge Railways	1,653,186	27,804,820	18 48	19,422,899	176,981,140	196,403,987	12 50	113 94	126 45	391,347,837	1,202,445	194 01	0 77

ABSTRACT STATISTICS OF WORKING INDIAN RAILWAYS.

CARRYING CAPACITY (COACHING TRAFFIC).—HALF-YEAR ENDING 30TH JUNE 1883.

From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881

RAILWAYS	Coaching Train-Miles Run.	Vehicle Miles.	Average Number of Vehicles in a Train	Gross Ton-Mileage of all Coaching Trains			Average Weight of Coaching Trains			Passenger Unit-Mileage	Other Traffic Ton-Mileage.	Average Number of Units in a Train	
				Freight	Dead Weight	TOTAL.	Freight.	Dead Weight.	TOTAL.			Passenger Unit	Other Coaching Traffic.
										No	Ton-Miles		
BROAD GAUGE													
East Indian	1,776,281	82,998,863	18 56	29,763,512	378,512,240	408,275,752	18 76	219 09	229 65	424,329,718	3,184,483	238 89	2 21
Great Indian Peninsula	1,313,467	19,168,646	14 59	15,001,796	202,848,795	217,850,591	11 42	154 43	165 85	198,053,367	2,725,759	150 79	2 08
Sind, Punjab, and Delhi	816,553	8,562,406	16 57	8,027,854	101,343,287	109,371,141	15 54	146 19	211 73	118,559,563	776,073	229 55	1 50
Madras	420,841	5,994,677	14 28	7,215,021	87,320,412	74,535,438	17 16	160 16	177 32	104,004,323	872,064	247 87	2 07
Bombay, Baroda, and Central India	417,085	7,152,888	17 15	8,316,770	82,107,005	90,422,775	19 09	166 88	216 80	116,661,222	1,178,869	270 71	2 83
Eastern Bengal	189,644	3,216,517	17 81	3,386,239	33,586,000	36,972,239	18 75	185 92	204 67	50,654,890	300,806	260 44	1 87
Oudh and Rohilkhand	251,973	5,885,802	21 00	4,707,487	51,814,442	60,521,929	18 71	221 77	240 48	71,978,204	351,435	286 00	1 40
Indus Valley	174,583	3,943,288	22 59	2,885,042	44,214,538	47,099,580	16 52	258 26	269 78	38,947,259	524,258	223 09	3 00
Punjab Northern	239,828	4,263,142	17 77	3,403,280	50,021,071	53,424,351	14 19	208 57	222 76	48,417,827	456,312	201 68	1 90
Patna Gya	—	—	—	—	—	—	—	—	—	—	—	—	—
Nizam's	76,800	1,142,769	15 00	903,140	12,139,923	13,043,063	11 76	158 07	169 83	11,462,237	197,027	149 25	2 57
TOTAL of all Broad Gauge Railways	5,867,265	91,693,058	17 09	83,609,141	1,027,902,718	1,111,511,854	15 69	191 54	207 09	1,183,133,600	11,915,848	220 43	2 11
TOTAL, including East Indian Railway	5,690,974	88,724,393	16 85	53,845,520	649,390,473	703,236,102	14 99	10 884	195 83	758,803,982	7,381,363	211 31	2 05
NARROW GAUGE													
South Indian	347,394	5,836 978	16 80	5,818,133	41,829,706	47,642,839	16 73	120 41	137 14	63,314,650	174,295	268 61	0 50
Rajputana-Malwa	816,174	15,582,103	19 09	10,748,916	90,913,536	101,662,452	13 17	111 39	124 66	158,943,702	1,140,680	194 77	1 40
Mysore	21,835	391,980	17 95	369,841	2,532,017	2,901,858	16 94	115 06	132 00	5,686,471	22,757	260 43	1 04
Nagpur and Chhattisgarh	39,856	800,376	20 08	584,016	8,533,358	9,097,374	14 15	214 10	228 25	8,710,481	38,192	218 55	0 96
Hangoon and Irrawaddy Valley	162,774	2,997,174	19 62	1,789,867	18,104,811	19,894,678	11 71	118 51	130 22	23,592,051	63,519	187 15	0 42
Northern Bengal	113,138	2,150,595	19 01	1,210,861	13,531,466	14,751,347	10 78	119 60	130 38	17,861,252	128,404	167 87	1 13
Tirhoot	62,111	940,092	15 78	805,231	6,382,489	7,187,720	12 96	102 76	115 72	11,965 530	98,232	187 82	1 58
Cawnpore-Farukhabad	37,547	839,083	23 96	546,679	8,089,348	6,635,961	14 56	138 04	160 10	8,678,121	24,832	231 07	0 61
Bhavnagar-Gondal	76,218	1,478,064	19 66	1,084,732	6,787,463	9,872,195	14 42	116 84	131 26	16,173,683	107,171	215 04	1 42
TOTAL of Narrow Gauge Railways	1,666,042	31,117,545	18 67	22,942,230	195,704,214	219,646,444	13 78	117 47	131 24	349,043,941	1,797,562	209 86	1 08

ABSTRACT STATISTICS OF WORKING INDIAN RAILWAYS

CARRYING CAPACITY (COACHING TRAFFIC)

GENERAL ABSTRACT.

FROM STATISTICS compiled in accordance with Public Works Department Circular, No. 7 Railway, dated 17th February 1881

RAILWAYS.	Coaching Train-Miles Run.	Vehicle Mileage.	Average Number of Vehicles in a Train.	Gross Ton-Mileage of all Coaching Trains			Average Weight of Coaching Trains.			Passenger Unit Mileage.	Other Traffic Ton-Mileage.	Average Number of Units in a Train.	
				Freight.	Dead Weight.	TOTAL.	Freight.	Dead Weight.	TOTAL.			Passenger Unit.	Other Coaching Traffic.
ALL BROAD GAUGE RAILWAYS													
First Half of 1881	4,809,335	85,723,419	17 82	79,393,014	911,472,279	990,854,193	18 50	189 52	206 02	1,087,771,604	12,596,575	226 16	2 62
Second Half of 1881	4,905,446	84,996,517	17 32	68,389,649	628,694,304	665,925,045	13 93	182 79	198 72	977,696,564	9,044,890	199 31	1 84
First Half of 1882	5,087,000	89,811,116	17 65	82,365,614	960,324,526	1,042,690,140	16 19	188 73	204 97	1,189,709,679	9,650,690	233 83	1 99
Second Half of 1882	5,350,614	90,955,297	16 97	80,367,190	988,663,129	1,069,230,325	14 99	184 49	199 49	1,060,103,873	15,430,633	197 78	2 88
First Half of 1883	5,367,255	91,693,058	17 08	83,609,141	1,027,902,719	1,111,511,854	15 58	191 51	207 09	1,188,139,600	11,315,848	220 43	2 11
TOTAL	25,523,919	443,178,407	17 36	394,056,614	4,785,267,041	5,179,313,555	15 43	187 44	202 88	5,498,406,320	58,047,197	215 38	2 27
BROAD GAUGE RAILWAYS, EXCLUDING EAST INDIAN RAILWAY													
First Half of 1881	3,530,818	61,225,111	17 34	55,530,597	648,288,264	709,768,861	15 72	183 59	199 32	765,082,229	8,491,663	216 69	2 40
Second Half of 1881	3,002,722	60,904,838	16 71	46,969,716	628,063,210	673,932,926	12 78	174 33	187 06	669,162,190	5,440,498	186 74	1 51
First Half of 1882	3,096,396	61,866,941	16 73	53,446,308	655,754,358	709,200,668	14 46	177 40	191 86	773,986,286	6,064,166	209 39	1 64
Second Half of 1882	3,746,921	69,780,294	16 93	62,387,977	643,110,636	695,468,613	18 94	171 66	188 61	666,329,697	8,484,633	183 97	2 53
First Half of 1883	3,590,974	58,724,305	16 35	53,845,629	649,390,473	703,236,102	14 99	180 84	195 83	758,803,382	7,311,863	211 31	2 05
TOTAL	18,167,821	301,801,599	16 61	260,980,229	3,224,666,941	3,465,807,107	14 96	177 49	192 41	3,668,894,140	38,662,162	201 66	2 03
NARROW GAUGE RAILWAYS.													
First Half of 1881	1,232,665	24,058,415	19 51	17,476,763	147,141,071	164,613,734	14 18	119 37	133 54	269,843,206	1,161,117	218 91	0 59
Second Half of 1881	1,324,300	25,371,014	19 16	17,039,695	169,210,849	176,244,444	12 86	120 22	133 08	262,921,009	1,120,061	198 53	0 84
First Half of 1882	1,473,708	27,733,610	18 84	20,735,784	160,146,074	189,883,868	14 07	114 77	128 84	318,629,766	1,447,798	216 20	0 98
Second Half of 1882	1,558,185	27,804,820	18 48	19,422,839	176,981,146	196,403,966	12 50	118 94	126 45	301,347,637	1,202,445	194 01	0 77
First Half of 1883	1,666,042	31,117,545	18 67	22,942,330	195,704,914	218,646,444	13 78	117 47	131 24	349,648,941	1,797,582	209 86	1 08
TOTAL	7,249,960	136,110,492	18 77	97,611,211	848,186,264	945,797,465	13 46	116 99	130 45	1,502,385,549	6,718,943	207 22	0 92

ABSTRACT STATISTICS OF WORKING INDIAN RAILWAYS.

CARRYING CAPACITY (GOODS TRAFFIC)—HALF-YEAR ENDING 30TH JUNE 1881.

From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881

RAILWAYS.	Goods		Vehicle Mileage			Average Number of Vehicles in a Train.	Gross Ton-Mileage of Goods Trains.			Average Weight of Goods Trains			Average Load of a Goods Vehicle, including both Loaded and Empty.	Average Load of Loaded Goods Vehicle.		
	Train-Miles Run.	Loaded	Empty	Total, including Brake Vans	Freight		Dead Weight.	TOTAL.	Freight.	Dead Weight.	TOTAL.	Tons.			Tons.	Tons.
BROAD GAUGE																
East Indian - - - - -	2,812,977	57,904,321	22,188,139	83,130,850	29 55	454,816,125	612,489,336	1,067,301,461	181 00	217 73	379 42	5 09	7 85			
Great Indian Peninsula - - - - -	3,106,881	45,052,513	21,776,596	72,562,163	29 30	286,239 682	552,271,371	838,511,003	92 13	177 76	269 89	6 35	6 35			
Sind, Punjab, and Delhi - - - - -	902,721	15,098,322	9,040,545	24,901,192	31 02	75,202 027	195,108,634	270,370,661	93 76	243 06	3 26 82	3 12	4 98			
Madras - - - - -	455,548	7,728,571	1,927,321	10,617,413	23 90	35,058,253	91,815,190	126,878,443	76 06	201 55	278 51	3 75	4 54			
Bombay, Baroda, and Central India - - - - -	550,535	16,285,481	4,913,150	21,073,205	39 37	78,697,765	149,470,068	228,167,431	142 95	271 50	414 45	3 71	4 83			
Eastern Bengal - - - - -	167,769	3,175,094	691,609	3,967,750	25 08	19,446,798	32,670,218	52,116,956	123 26	207 07	330 33	5 03	6 12			
Oudh and Rohilkhand - - - - -	471,048	8,043,667	4,264,944	12,875,955	27 33	47,419,976	94,205,823	141,625,799	100 67	189 99	300 60	5 85	5 89			
Indus Valley - - - - -	670,098	7,108,368	6,079,016	13,068,303	20 57	38,693,171	119,797,699	158,490,870	56 97	178 41	233 38	2 98	5 44			
Punjab Northern - - - - -	374,381	3,868,173	2,263,066	6,359,790	16 98	16,169,834	57,664,964	73,834,798	43 19	154 03	197 22	2 62	4 19			
Patna Gya - - - - -	29,945	351,254	170,780	538 857	17 99	1,745 956	4,723,673	6,469,629	58 31	157 74	216 05	3 34	4 97			
Nizam's - - - - -	70,784	708,057	474,851	1,261,734	17 08	4,139,794	10,631,412	14,771,206	68 48	150 20	208 68	3 50	5 85			
TOTAL of all Broad Gauge Railways - - - - -	9,511,687	165,313,840	73,405,916	251,835,187	26 47	1,057,690,871	1,920,842,386	2,978,533,257	111 20	201 94	313 14	4 42	6 80			
Total, excluding East Indian Railway - - - - -	6,698,710	107,409,519	51,307,777	168,704,337	25 18	602,872,746	1,308,359,060	1,911,231,796	89 99	195 31	285 31	3 79	5 61			
NARROW GAUGE.																
South Indian - - - - -	402,888	5,514,305	2,077,672	7,709,761	19 36	20,984,226	37,807,014	58,701,240	52 11	93 89	146 00	2 76	3 89			
Rajputana - - - - -	906,200	12,966,133	4,976,753	18,686,864	20 62	56,031,103	81,616,658	136,647,761	60 73	90 06	150 79	3 07	4 24			
Holkar and Sindia-Neemach - - - - -	188,340	2,701,370	824,260	3,802,922	20 90	8,474,785	18,071,063	26,545,848	45 00	65 90	140 96	2 40	3 14			
Nagpur and Chhattisgarh - - - - -	30,932	513,735	217,390	765,846	24 76	1,627,507	3,168,717	4,796,224	52 62	102 44	155 06	2 22	3 17			
Rangoon and Irrawaddy Valley - - - - -	157,706	2,068,679	1,359,906	3,548,444	22 50	10,233,833	15,870,110	26,128,943	65 02	100 66	165 68	2 99	4 96			
Northern Bengal - - - - -	150,858	2,454,424	726 067	3,402,518	22 55	7,700,602	15,760,505	23,461,107	51 00	104 47	150 52	2 42	3 14			
Tirhoot - - - - -	51,144	653,319	245,165	918,245	17 96	2,185,801	3 890,761	6,076,562	42 74	76 07	118 81	2 43	3 35			
Cawnpore and Farukhabad - - - - -	19,041	242,179	70,780	343,770	18 05	670,491	1,541,718	2,212,119	35 21	80 96	116 17	2 14	2 77			
Bhavnagar-Gondal - - - - -	122,030	1,197,729	586,179	1,837,361	23 66	2,263,623	9,119,472	11,383,086	18 04	74 73	93 27	1 27	1 69			
TOTAL of Narrow Gauge Railways - - - - -	2,028,939	28,311,773	11,083,162	41,104,731	20 26	109,191,881	186,811,018	296,042,899	53 81	92 09	145 91	2 77	3 85			

APPENDIX TO REPORT FROM THE

ABSTRACT STATISTICS OF WORKING INDIAN RAILWAYS

CARRYING CAPACITY (GOODS TRAFFIC).—HALF-YEAR ENDING 31ST DECEMBER 1881

From Statistics compiled in accordance with Public Works Department Circular, No. 7 Railway, dated 17th February 1881

RAILWAYS	Goods Train-Miles Run.	Vehicle Mileage			Average Number of Vehicles in a Train.	Gross Ton-Mileage of Goods Trains			Average Weight of Goods Trains.			Average Load of a Goods Vehicle, including both Loaded and Empty	Average Load of a Loaded Goods Vehicle.
		Loaded.	Empty	Total, including Brake Vans		Freight.	Dead Weight.	TOTAL.	Freight.	Dead Weight.	TOTAL.		
BROAD GAUGE													
	No.	Vehicle Miles	Vehicle Miles	Vehicle Miles	No	Ton-Miles	Ton-Miles	Ton-Miles	Tons.	Tons.	Tons.	Tons.	Tons.
East Indian	2,936,517	63,805,338	24,065,328	91,436,648	31 14	509,670,833	664,810,739	1,174,481,572	173 57	226 41	399 98	5 79	7 98
Great Indian Peninsula	2,457,253	53,867,964	16,453,002	55,004,204	22 39	238,335,797	417,265,466	655,601,263	96 99	169 81	266 80	4 74	7 04
Sind, Punjab, and Delhi	769,564	12,314,734	6,902,582	19,927,489	25 89	58,112,687	165,232,642	223,345,329	75 51	214 71	290 22	5 02	4 72
Madras	484,888	7,984,832	1,801,239	11,064,360	22 82	36,417,670	95,972,513	132,390,283	75 10	197 93	273 03	3 72	4 56
Bombay, Baroda, and Central India	336,869	9,438,063	2,545,238	12,219,868	36 27	44,434,533	86,002,460	131,336,969	131 90	267 37	380 87	3 71	4 71
Eastern Bengal	274,454	5,435,347	2,756,440	8,429,089	30 71	38,528,808	66,686,426	105,215,279	140 38	242 98	383 36	4 70	7 09
Oudh and Rohilkhand	395,468	6,922,876	3,046,227	10,456,099	26 44	41,417,731	77,434,254	118,851,985	104 73	195 81	300 54	4 16	5 98
Indus Valley	662,954	8,415,630	6,577,038	15,748,977	23 76	54,951,260	128,509,544	189,460,804	82 89	193 84	276 73	3 67	6 53
Punjab Northern	239,052	2,777,781	1,745,338	4,896,409	20 48	12,960,028	44,193,139	57,153,167	54 21	184 87	238 08	2 86	4 66
Patna and Gya	30,544	441,187	91,825	551,882	18 07	1,673,939	4,840,380	6,514,319	54 80	158 47	213 27	3 14	3 79
Nizam's	65,997	604,600	407,216	1,080,016	16 36	3,799,115	9,435,981	13,225,096	57 41	142 98	200 39	3 74	6 27
TOTAL of all Broad Gauge Railways	8,663,370	152,107,443	66,391,483	230,815,641	26 67	1,040,292,446	1,761,283,644	2,801,576,090	120 22	203 54	323 76	4 76	6 84
TOTAL, excluding East Indian Railway	5,717,053	88,203,104	42,326,155	139,378,993	24 38	530,621,613	1,096,472,905	1,627,094,518	92 81	191 79	284 60	4 06	6 02
NARROW GAUGE.													
South Indian	388 133	5,358,159	1,881,287	7,411,184	19 09	19,691,620	37,973,347	57,664,867	50 78	97 83	148 56	2 72	3 67
Rajputana	899,247	13,801,046	5,257,246	19,778,423	21 99	52,464,574	90,785,326	143,249,900	58 34	100 06	159 30	2 75	3 80
Holkar and Sindia Neemuch	163,074	2,167,137	660,256	3,029,891	18 08	7,737,012	16,138,122	23,875,434	47 44	98 96	146 40	2 74	3 57
Nagpur and Chhattisgarh	27,271	319,812	198,181	563,904	20 67	1,079,268	2,588,836	3,668,104	39 58	94 93	134 51	2 08	3 37
Rangoon and Irrawaddy Valley	79,667	1,266,871	389,180	1,686,391	21 16	4,383,586	7,534,731	11,918,317	55 02	94 58	149 60	2 65	3 46
Northern Bengal	176,581	3,624,776	1,234,296	4,767,937	26 97	9,791,844	21,415,170	31,207,014	55 45	121 28	176 73	2 06	2 78
Turhoot	45,308	622,035	198,753	886,814	18 47	2,044,938	3,556,981	5,601,919	45 13	78 51	123 64	2 49	3 29
Cawnpore and Farrukhabad	25,687	499,420	161,719	706,583	27 50	1,679,349	2,816,743	4,496,092	65 38	109 66	175 04	2 54	3 36
Bhavnagar-Gondal	63,162	880,519	657,448	1,594,278	25 24	3,121,945	6,443,339	9,567,284	49 43	102 04	151 47	2 03	3 54
TOTAL of Narrow Gauge Railways	1,868,130	28,439,774	10,638,366	40,369,405	21 61	101,994,036	189,264,595	291,248,631	54 59	101 31	155 90	2 61	3 59

ABSTRACT STATISTICS OF WORKING INDIAN RAILWAYS

CARRYING CAPACITY (GOODS TRAFFIC).—HALF-YEAR ENDING 30TH JUNE 1882.

From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881

RAILWAYS.	Goods Train Miles	Vehicle Mileage			Average Number of Vehicles in a Train.	Gross Ton-Mileage of Goods Trains			Average Weight of Goods Trains.			Average Load of a Goods Vehicle, including both Loaded and Empty	Average Load of a Loaded Goods Vehicle.	
		Ran.	Loaded	Empty		Total, including Break Vans	Freight	Dead Weight.	TOTAL.	Freight.	Dead Weight.			TOTAL.
BROAD GAUGE														
East Indian - - - - -	3,078,095	64,350,499	25,273,158	93,310,047	30 22	521,362,496	684,698,492	1,206,060,988	169 38	222 44	391 82	5 82	3 10	
Great Indian Peninsula - - - -	8,660,894	60,399,773	25,144,639	82,217,330	23 09	337,268,058	495,016,419	932,284,477	100 33	178 33	278 66	4 73	7 09	
Sind, Panjab, and Delhi - - - -	804,537	13,365,152	7,276,893	21,381,608	26 58	69,479,921	162,160,569	231,660,490	86 36	2 6 44	912 80	3 62	5 20	
Madras - - - - -	518,043	9,300,630	1,824,120	12,375,675	23 89	43,332,750	105,847,320	149,180,070	83 65	204 32	287 97	3 93	4 71	
Bombay, Baroda, and Central India -	500,893	15,942,299	6,198,572	21,626,995	38 56	89,618,724	153,771,898	243,390,622	159 78	274 15	437 98	4 24	5 62	
Eastern Bengal - - - - -	179,858	3,786,434	949,473	4,861,061	26 93	2,911,771	39,166,048	62,097,819	127 39	217 87	345 26	4 84	6 06	
Oudh and Rohilkhand - - - - -	511,330	6,291,021	4,107,949	13,991,246	27 86	59,380,370	101,949,377	160,920,347	114 17	199 19	313 36	4 36	6 28	
Indus Valley - - - - -	724,081	8,566,214	6,214,998	15,699,181	21 54	61,654,731	134,767,192	186,421,923	71 94	146 12	257 46	3 60	6 04	
Punjab Northern - - - - -	285,819	3,292,643	1,943,836	5,870,551	30 53	16,933,275	53,342,936	70,275,960	69 28	186 76	246 04	3 23	5 14	
Patna and Gya - - - - -	37,202	460,132	88,822	877,530	15 52	2,026,442	5,120,435	7,146,877	54 47	137 64	192 11	3 09	4 40	
Nisam's - - - - -	82,277	744,506	569,188	1,356,006	16 48	4,573,758	12,104,907	16,678,665	65 59	147 12	202 71	3 65	6 14	
TOTAL of all Broad Gauge Railways -	10,342,827	179,392,303	78,531,646	273,167,322	26 41	1,237,562,296	2,107,885,948	3,345,448,238	119 65	208 80	323 45	4 89	6 69	
TOTAL, excluding East Indian Railway -	7,264,732	115,041,804	53,258,488	170,857,275	24 75	716,179,800	1,423,187,450	2,139,367,250	98 68	195 90	294 48	4 25	6 22	
NARROW GAUGE.														
South Indian - - - - -	430,561	5,369,921	1,766,301	7,523,494	17 47	19,346,322	39,993,758	59,345,080	44 93	92 90	137 83	2 71	3 61	
Rajputana-Malwa - - - - -	1,295,169	20,711,203	6,699,311	28,465,126	21 98	77,853,852	128,923,882	206,777,234	60 11	99 54	159 65	2 84	3 76	
Mysore - - - - -	22,443	82,562	58,359	153,061	6 82	625,691	667,673	1,313,254	97 98	30 64	58 62	4 44	7 50	
Nagpur and Chhattisgarh - - - - -	85,975	1,260,649	830,919	2,239,425	26 05	4,467,088	10,202,710	14,669,798	51 96	118 67	170 63	2 14	3 34	
Rangoon and Irrawaddy Valley - - -	164,527	2,459,980	1,416,078	3,961,657	28 79	10,304,465	17,311,711	27,616,176	61 88	103 96	165 84	2 66	4 19	
Northern Bengal - - - - -	185,326	3,798,532	1,903,299	4,806,068	25 93	10,046,140	21,661,153	31,707,293	54 21	116 88	171 09	2 09	2 64	
Tirhoot - - - - -	77,708	1,083,294	353,695	1,473,400	18 94	3,313,273	5,956,010	9,269,283	42 64	76 65	119 29	2 31	3 06	
Cawnpore and Farukhabad - - - -	32,771	530,089	254,068	837,755	25 56	1,966,015	3,455,442	5,421,457	59 99	105 44	165 43	2 57	3 71	
Bhavnagar-Gondal - - - - -	120,432	1,792,122	906,565	2,806,830	23 30	5,043,334	11,865,689	17,809,003	49 35	98 53	147 88	2 20	3 32	
TOTAL of Narrow Gauge Railways - -	2,416,912	37,081,362	18,287,595	52,268,755	21 62	133,866,170	240,062,408	373,928,578	55 39	99 32	154 71	2 66	3 61	

ABSTRACT STATISTICS OF WORKING INDIAN RAILWAYS.

CARRYING CAPACITY (GOODS TRAFFIC) — HALF-YEAR ENDING 31ST DECEMBER 1882.

From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881

RAILWAYS.	Goods		Vehicle Mileage.			Average Number of Vehicles in a Train.	Gross Ton-Mileage of Goods Trains			Average Weight of Goods Trains.			Average Load of a Goods Vehicle, including both Loaded and Empty	Average Load of a Loaded Goods Vehicle.
	Train Miles Run.	No.	Loaded.	Empty	Total, including Brake Vans.		Freight.	Dead Weight.	TOTAL	Freight.	Dead Weight.	TOTAL.		
BROAD GAUGE														
East Indian	2,869,691	62,206,609	24,577,900	90,522,860	90 48	482,048,581	681,700,192	1,143,746,773	162 32	222 82	985 14	5 55	7 75	
Great Indian Peninsula	2,004,175	28,809,306	10,825,579	45,503,222	21 71	187,760,652	341,634,741	520,695,393	93 68	170 61	264 29	4 73	6 50	
Sind, Punjab, and Delhi	730,554	11,525,082	6,380,176	18,587,279	25 44	69,619,906	161,204,660	230,824,656	95 30	220 66	315 96	3 80	6 04	
Madras	527,072	8,911,934	1,905,692	12,172,533	23 09	39,677,427	106,653,237	146,330,664	75 28	202 35	277 63	3 67	4 46	
Bombay, Baroda, and Central India	357,297	8,945,554	2,648,866	11,964,254	33 49	45,796,117	86,838,619	132,634,736	128 18	243 04	371 22	3 95	5 12	
Eastern Bengal	298,002	6,103,163	3,094,183	9,425,705	31 62	40,521,240	74,467,372	114,988,612	135 93	249 81	385 74	4 40	6 64	
Oudh and Rohilkhand	368,609	6,161,213	1,950,630	8,559,598	23 23	35,277,577	65,632,478	100,910,055	95 73	178 10	273 83	4 25	5 73	
Indus Valley and Kandahar	741,312	9,861,069	7,112,618	17,836,604	24 06	70,665,078	151,866,331	222,533,409	95 32	204 87	300 19	4 16	7 17	
Punjab Northern	182,677	2,348,626	1,117,873	3,892,947	21 31	11,512,769	35,688,978	47,201,747	63 02	195 37	258 39	3 32	4 90	
Patna and Gya	39,246	482,728	114,863	634,301	16 16	1,681,108	5,466,243	7,147,351	42 84	139 28	182 12	2 81	3 48	
Nizam's	72,127	656,482	124,764	1,188,901	16 47	4,011,367	10,648,565	14,659,932	55 61	147 64	203 25	3 71	6 11	
TOTAL of all Broad Gauge Railways	6,290,752	146,101,766	60,152,944	218,287,304	26 33	988,569,912	1,702,103,416	2,660,673,328	119 24	205 30	324 54	4 79	6 77	
TOTAL, excluding East Indian Railway	5,421,061	83,895,157	35,575,044	127,764,444	24 01	606,623,331	1,040,403,224	1,546,926,555	95 19	195 52	290 71	4 24	6 04	
NARROW GAUGE.														
South Indian	442,187	5,395,465	1,878,146	7,787,309	17 56	20,090,647	41,047,216	61,137,863	45 43	92 82	138 26	2 76	3 72	
Rajputana-Malwa	851,694	14,016,658	4,641,628	19,174,908	23 51	52,963,864	95,201,310	148,156,174	62 17	111 78	173 95	2 85	3 78	
Mysore	26,375	282,893	89,074	363,294	14 00	638,922	1,917,695	2,556,617	24 22	72 71	96 93	1 72	2 26	
Nagpur and Chhattisgarh	43,361	574,575	347,046	961,959	22 64	2,067,364	4,702,137	6,769,501	47 68	108 44	156 12	2 24	3 60	
Rangoon and Irrawaddy Valley	89,727	1,374,311	604,656	1,967,004	22 18	4,619,023	8,584,015	13,203,538	52 06	96 75	148 81	2 38	3 36	
Northern Bengal	204,251	3,900,905	1,686,637	5,804,181	28 42	11,056,774	25,808,159	36,866,933	54 14	126 36	180 50	1 98	2 83	
Tirhoot	72,623	1,093,020	291,952	1,422,613	19 59	3,526,662	5,796,447	9,323,109	48 66	79 82	128 38	2 55	3 23	
Cannore and Farukhabad	87,260	637,258	182,830	771,637	28 29	1,478,849	3,108,306	4,587,155	54 25	114 02	168 27	2 05	2 75	
Bhavnagar-Gondal	35,044	545,551	379,611	951,744	27 15	1,402,640	3,857,341	5,259,981	40 02	110 07	150 09	1 52	2 57	
TOTAL of Narrow Gauge Railways	1,791,522	27,721,226	9,960,280	39,227,044	21 90	97,836,745	190,022,626	287,859,371	54 61	106 07	160 68	2 50	3 53	

ABSTRACT STATISTICS OF WORKING INDIAN RAILWAYS.

CARRYING CAPACITY (GOODS TRAFFIC)—HALF-YEAR ENDING 30TH JUNE 1883
 From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 7th February 1881

RAILWAYS	Goods Train-Miles Run	Vehicle Mileage			Average Number of Vehicles in a Train	Gross Ton-Mileage of Goods Trains			Average Weight of Goods Train			Average Load of a Goods Vehicle, including both Loaded and Empty	Average Load of a Loaded Goods Vehicle
		Loaded	Empty	Total, including Brake Vans		Freight.	Dead Weight	TOTAL	Freight.	Dead Weight.	TOTAL		
BROAD GAUGE	<i>No</i>	<i>Vehicle Miles</i>	<i>Vehicle Miles</i>	<i>Vehicle Miles</i>	<i>No</i>	<i>Ton-Miles</i>	<i>Ton Miles</i>	<i>Ton-Miles</i>	<i>Tons</i>	<i>Tons</i>	<i>Tons</i>	<i>Tons</i>	<i>Tons</i>
East Indian - - - - -	3,750,819	77,587,791	81,345,198	113,922,346	30 37	624,013,080	846,978,020	1,470,991,100	166 76	225 81	392 17	5 70	8 05
Great Indian Peninsula - - - - -	3,603,959	49,704,174	26,361,571	82,465,151	22 88	390,776,452	648,467,712	1,039,244,164	108 43	179 93	288 36	5 14	7 86
Sind, Punjab, and Delhi - - - - -	1,072,504	17,347,647	9,346,027	27,671,023	25 80	114,374,680	245,846,686	360,221,369	106 64	229 23	335 87	4 28	6 59
Madras - - - - -	521,378	8,887,718	1,616,670	12,496,176	23 97	41,450,830	110,292,623	151,743,462	79 50	211 54	201-04	3 84	4 67
Bombay, Baroda, and Central India - - - - -	703 304	19 191,197	7,545,325	27,385,682	88 87	109,909,782	196,041,436	305,951,218	156 28	278 74	436 02	4 11	5 73
Eastern Bengal - - - - -	223,627	4,968,700	1,496,285	6,337,667	28 34	28,984,108	51,376,095	80, 60,203	129 61	229 74	359 35	4 69	6 18
Oudh and Rohilkhand - - - - -	471,965	8,475,687	3,108,090	12,127,763	25 70	55,756,329	89,739,172	145,495,501	118 14	190 14	308 28	4 81	6 58
Indus Valley and Kandahar - - - - -	903,289	15,140,565	10,628,396	26 792,986	29 86	114,964,329	217,603,657	332,467,966	127 27	240 80	368 07	4 48	7 59
Punjab Northern - - - - -	230,097	2,601,506	1,434,356	4,414,296	19 18	12,138,015	40,360,176	52,518,391	62 75	175 49	228 24	3 01	4 67
Patna-Gya† - - - - -	—	—	—	—	—	—	—	—	—	—	—	—	—
Nizam's - - - - -	72,237	720,454	383,321	1,210,004	16 76	4,077,131	10,822,751	15,499,882	64 75	149 82	214 67	4 23	6 49
TOTAL of all Broad Gauge Railways -	11,553,239	204,275,598	93,966,249	312,774,193	27 07	1,497,044,745	2,457,448,528	3,954,403,273	129 57	212 71	342 28	5 02	7 23
Total, excluding East Indian Railway	7,802,340	128,737,777	62,121,051	198,851,847	25 48	673,031,665	1,600,470,608	2,483,502,173	111 89	206 41	318 30	4 62	6 89
NARROW GAUGE													
South Indian - - - - -	432,758	5,627 551	2 059,624	7,960,897	18 40	20,772,035	41,874,358	62,446,393	48 00	96 50	144 30	2 70	3 69
Rajputana-Malwa - - - - -	1,885,650	26,308,870	12,106,976	39,766,076	25 08	117,734,019	196,27,744	314,461,763	74 25	124-07	198 52	3 06	4 47
Mysore - - - - -	21,959	249,008	59,365	318,971	14 60	807,697	1,872,338	2,680,035	80 95	85 66	122 61	2 62	3 24
Nagpur and Chhattisgarh - - - - -	911,677	3 704,924	2 206,866	5,833,993	27 56	16,123,857	22,030,860	38,154,717	76 17	104-08	180 25	2 88	4 75
Rangoon and Irrawaddy Valley - - - - -	172,626	2 848,632	1 409,403	4,337,819	25 13	10,453,193	18,571,514	28,984,707	60 55	107 35	167 90	2 45	3 67
Northern Bengal - - - - -	239,762	4,886,122	1,622,717	6,667,343	27 81	12,918,258	29,021,978	41,939,536	63 88	121 04	174 92	2 03	2 64
Tirhoot - - - - -	171 987	1 815 150	867,287	2,249,822	17 12	4 480,512	10,123,221	14,603,733	84 10	77-05	111-15	2 05	2 47
Cawnpore and Farukhabad - - - - -	29,870	566,351	214,615	812,194	27 19	2,052,549	3,213,041	5,265,590	68-71	107 37	176 28	2 63	3 62
Bhavnagar-Gondal - - - - -	95,281	1,737,209	804,406	2,680,902	28 14	4,239,371	10,611,066	14,950,437	45 54	111 37	136-91	1 67	2 50
TOTAL of Narrow Gauge Railways -	2,920,879	47,483,817	18,918,753	70,627,917	24 18	189,681,491	333,805,420	523,486,911	64 94	114-28	179 22	2 86	3 99

* Excluding train mileages run on Bhopal Railway

† This line is now worked by the East Indian Railway Company

ABSTRACT STATISTICS OF WORKING INDIAN RAILWAYS

CARRYING CAPACITY.—GOODS TRAFFIC.

GENERAL ABSTRACT.

From Statistics compiled in accordance with Public Works Department, Circular, No 7 Railway, dated 17th February 1881

RAILWAYS	Goods Train-Miles Run.	Vehicle Mileage			Average Number of Vehicles in a Train.	Gross Ton-Mileage of Goods Trains.			Average Weight of Goods Trains.			Average Load of a Goods Vehicle, including both Loaded and Empty	Average Load of a Loaded Goods Vehicle
		Loaded.	Empty	Total, including Brake Vans.		Freight	Dead Weight.	TOTAL.	Freight.	Dead Weight.	TOTAL.		
ALL BROAD GAUGE RAILWAYS.	<i>No</i>	<i>Vehicle Miles</i>	<i>Vehicle Miles</i>	<i>Vehicle Miles</i>	<i>No</i>	<i>Ton Miles</i>	<i>Ton Miles</i>	<i>Ton Miles</i>	<i>Tons</i>	<i>Tons</i>	<i>Tons</i>	<i>Tons</i>	<i>Tons</i>
First Half of 1881	9,511,687	165,313,840	73,495,916	251,835,187	26 47	1,057,630,870	1,920,842,386	2,978,533,257	111 20	201 94	313 14	4 42	6 30
Second Half of 1881	8,653,370	152,108,443	66,391,483	230,815,641	26 67	1,040,292,446	1,761,283,644	2,801,576,090	120 22	203 54	323 76	4 76	6 84
First Half of 1882	10,342,827	179,392,303	78,531,646	273,167,322	26 41	1,237,662,296	2,107,985,942	3,345,448,238	119 65	203 80	323 45	4 80	6 89
Second Half of 1882	8,290,752	146,101,766	60,102,944	218,287,304	26 33	988,569,912	1,702,103,416	2,690,673,328	119 24	205 30	324 64	4 79	6 77
First Half of 1883	11,553,239	204,275,568	93,966,249	312,774,193	27 07	1,497,044,745	2,457,448,528	3,954,493,273	129 57	212 71	342 28	5 02	7 23
TOTAL	48,351,875	847,191,920	372,538,238	1,286,879,647	26 61	5,821,160,270	9,949,563,916	15,770,724,186	120 39	203 70	326 16	4 77	6 87
BROAD GAUGE RAILWAYS, EXCLUDING EAST INDIAN RAILWAY													
First Half of 1881	6,698,710	107,409,519	51,307,777	168,704,337	25 18	602,872,746	1,308,353,050	1,911,231,796	89 99	195 31	285 31	3 79	5 61
Second Half of 1881	5,717,053	88,203,104	42,326,155	139,378,993	24 58	530,621,613	1,096,472,905	1,627,094,518	92 81	191 79	284 60	4 06	6 02
First Half of 1882	7,204,732	116,041,804	55,258,488	179,857,275	24 75	716,179,800	1,423,187,460	2,139,367,250	98 58	195 30	294 48	4 25	6 22
Second Half of 1882	5,321,061	83,893,157	35,375,044	127,764,444	24 01	506,523,331	1,040,403,224	1,546,926,555	95 19	195 52	290 71	4 24	6 04
First Half of 1883	7,802,340	126,737,777	62,121,051	198,851,847	25 48	873,031,565	1,600,470,508	2,483,502,173	111 89	206 41	318 30	4 62	6 89
TOTAL	32,803,896	521,287,361	244,568,515	814,556,896	24 83	3,229,229,155	6,468,893,137	9,708,122,292	98 44	197 19	295 94	4 21	6 19
NARROW GAUGE RAILWAYS.													
First Half of 1881	2,028,939	28,311,773	11,083,162	41,104,731	20 26	109,191,881	186,851,018	296,042,899	53 81	92 09	145 91	2 77	3 85
Second Half of 1881	1,866,130	28,439,774	10,638,366	40,369,405	21 61	101,994,036	189,254,595	291,248,631	54 59	101 31	155 80	2 61	3 59
First Half of 1882	2,416,912	37,081,362	13,287,595	52,268,755	21 62	133,866,170	240,062,408	373,928,578	55 39	99 32	154 71	2 66	3 61
Second Half of 1882	1,791,522	27,721,229	9,360,280	39,227,044	21 90	97,896,745	190,022,626	287,859,371	54 61	106 07	160 68	2 69	3 53
First Half of 1883	2,920,879	47,483,817	18,813,753	70,627,917	24 18	189,681,491	333,805,420	523,486,911	64 94	114 28	179 22	2 86	3 99
TOTAL	11,026,382	169,037,952	63,783,156	243,597,852	22 09	632,570,323	1,139,396,087	1,772,566,390	57 37	103 38	160 75	2 71	3 74

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING (MAINTENANCE)—HALF-YEAR ENDING 30TH JUNE 1881

From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881

RAILWAYS.	Cost of Maintenance.	Length of Lines Maintained	Length of Single Track, including Sidings	Total Train-Mileage	Gross Ton-Mileage.	Per Mile of Line Maintained	Per Mile of Track, including Sidings	Per Total Train Mile.	Per 1,000 Gross Ton Miles.
	<i>Rs</i>	<i>Miles</i>	<i>Miles</i>	<i>Miles</i>	<i>Miles</i>	<i>Rs.</i>	<i>Rs</i>	<i>As.</i>	<i>Rs</i>
BROAD GAUGE									
East Indian - - - - -	20,10,672	1,504	2,244	4,091,494	1,354,388,793	1338 39	895 9 ^a	7 66	1 48
Great Indian Peninsula - - - - -	16,73,489	1,446	1,992	4,209,829	1,022,560,017	1156 81	837 97	0 86	1 63
Sind, Punjab, and Delhi - - - - -	7,61,783	669	705	1,441,034	409,187,243	1148 11	958 52	8 45	1 86
Madras - - - - -	6,09,680	858	996	957,296	209,027,890	710 52	612 08	10 19	2 92
Bombay, Baroda, and Central India - - - - -	4,26,142	444	547	914,988	805,486,975	959 77	779 08	7 45	1 39
Eastern Bengal - - - - -	1,72,886	172	216	315,121	84,295,647	1004 86	800 15	8 77	2 05
Oudh and Rohilkhand - - - - -	3,26,916	547	627	696,944	201,634,353	697 82	521 46	7 51	1 62
Indus Valley and Kandahar - - - - -	4,74,658	653	707	912,586	223,661,268	726 77	671 22	8 32	2 12
Punjab Northern - - - - -	2,42,819	324	357	648,598	110,175,452	748 48	677 90	5 98	2 03
Purna-Gya - - - - -	20,450	67	83	57,263	12,812,455	357 51	325 01	5 71	1 60
Nizam's - - - - -	87,008	117	136	128,057	27,050,357	315 96	292 30	4 61	1 88
TOTAL of all Broad Gauge Railways - - - - -	67,56,748	5,785	8,670	14,378,000	3,969,389,450	905 69	779 21	7 52	1 70
TOTAL, excluding East Indian Railway - - - - -	47,46,176	5,281	6,426	10,281,715	2,615,000,657	898 54	738 43	7 39	1 81
NARROW GAUGE.									
South Indian - - - - -	3,83,622	621	679	635,295	94,294,456	617 97	564 49	9 66	4 05
Rajputana - - - - -	4,06,545	656	749	1,421,382	199,929,161	619 49	542 97	4 58	2 98
Holkar and Sindia Neemuoh - - - - -	2,23,638	289	303	326,802	44,093,371	817 08	743 77	11 05	5 12
Nagpur and Chhattisgarh - - - - -	11,497	53	67	51,025	6,761,674	216 92	199 95	3 60	1 70
Rangoon and Irrawaddy Valley - - - - -	1,17,081	161	193	271,494	42,896,686	737 21	607 51	6 90	2 72
Northern Bengal - - - - -	1,07,776	231	261	243,338	25,888,239	467 19	413 55	7 09	3 00
Tirhoot - - - - -	29,356	82	94	82,215	10,385,291	357 91	311 46	5 71	2 83
Cawnpore-Farukhabad - - - - -	11,605	86	96	64,670	7,150,013	134 94	121 20	2 87	1 62
Bhavnagar Gondal - - - - -	45,914	192	220	172,172	19,277,742	298 51	298 96	4 27	2 38
TOTAL of Narrow Gauge Railways - - - - -	13,39,934	2,371	2,632	3,268,393	460,661,633	664 75	604 91	6 55	2 91

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING (MAINTENANCE) —HALF-YEAR ENDING 31ST DECEMBER 1881.

From Statistics compiled in accordance with Public Works Department Circular No 7 Railway, dated 17th February 1881

0 61.

5 2 2

SELECT COMMITTEE ON EAST INDIAN RAILWAYS

823

RAILWAYS.	Cost of Maintenance	Length of Lines Maintained	Length of Single Track, including Sidings	Total Train-Mileage.	Gross Ton-Mileage.	Per Mile of Line Maintained.	Per Mile of Track, including Sidings.	Per Total Train-Mile	Per 1,000 Gross Ton-Miles
	Rs	Miles	Miles	Miles	Miles	Rs.	Rs	As.	Rs
BROAD GAUGE.									
East Indian - - - - -	23,43,214	1,507	2,250	4,239,041	1,465,573,690	1555 14	1041 43	8 84	1 60
Great Indian Peninsula - - - - -	19,22,039	1,446	1,992	3,633,126	827,568,907	1328 71	904 71	8 46	2 32
Sind, Punjab, and Delhi - - - - -	7,60,180	668	795	1,301,159	348,438,958	1159 26	967 82	9 11	2 21
Madras - - - - -	6,44,867	858	997	964,820	211,106,028	751 36	646 61	10'69	3 04
Bombay, Baroda, and Central India - - - - -	4,89,360	448	546	751,838	214,795,661	1105 00	895 04	10 41	3 28
Eastern Bengal - - - - -	1,66,474	172	216	428,659	135,910,489	956 49	792 55	6 17	1 22
Oudh and Rohilkhand - - - - -	3,56,563	547	628	627,681	181,736,718	652 03	568 00	9 08	1 96
Indus Valley and Kandahar - - - - -	3,34,377	653	707	921,786	241,867,782	511 98	472 85	5 80	1 38
Punjab Northern - - - - -	2,42,246	358	397	500,205	100,913,657	677 13	609 67	7 75	2 40
Patna-Gya - - - - -	17,468	57	63	60,673	13,297,716	305 38	277 60	4 61	1 31
Nizam's - - - - -	37,241	117	126	124,843	24,891,547	318 02	294 18	4 77	1 50
TOTAL of all Broad Gauge Railways - - -	73,21,829	6,821	8,717	13,603,631	3,767,101,133	1073 42	839 94	8 61	1 94
TOTAL, excluding East Indian Railway - - -	49,78,615	5,314	6,467	9,384,590	2,301,527,443	936 86	799 64	8 51	2 16
NARROW GAUGE									
South Indian - - - - -	3,27,395	641	703	626,212	94,320,706	610 37	466 37	8 26	3 47
Rajputana - - - - -	5,28,404	726	813	1,474,189	216,198,551	727 76	649 87	5 73	2 44
Holkar and Sindh-Neemuch - - - - -	1,68,011	289	317	328,821	49,976,468	580 91	529 75	8 18	3 74
Nagpur and Chhattisgarh - - - - -	25,318	55	59	48,056	5,631,614	460'38	426 61	9 41	4 50
Rangoon and Irrawaddy Valley - - - - -	1,01,776	161	193	175,790	25,240,973	632 15	523 10	9 26	4 03
Northern Bengal - - - - -	1,02,514	233	260	278,585	44,823,559	439 97	394 63	6 89	2 29
Tirhoot - - - - -	37,603	79	92	76,551	9,760,923	478 05	408 42	7 56	3 65
Cawnpore-Faiukhabad - - - - -	27,674	86	96	68,250	10,880,853	318 77	287 99	6 46	2 55
Bhavnagar-Gondal - - - - -	49,031	194	210	117,976	16,799,425	252 74	223 13	6 65	2 98
TOTAL of Narrow Gauge Railways - - -	13,67,626	2,464	2,753	3,192,480	472,493,075	555 04	496 77	6 85	2 89

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS.

COST OF WORKING (MAINTENANCE)—HALF-YEAR ENDING 30TH JUNE 1882.
 From Statistics compiled in accordance with Public Works Department Circular No 7 Railway, dated 17th February 1881

RAILWAYS	Cost of Maintenance	Length of Lines Maintained	Length of Single Track, including Sidings	Total Train-Mileage	Gross Ton-Mileage.	Per Mile of Line Maintained	Per Mile of Track, including Sidings	Per Total Train-Mile	Per 1,000 Gross Ton-Miles
	<i>Rs</i>	<i>Miles</i>	<i>Miles</i>	<i>Miles.</i>	<i>Miles.</i>	<i>Rs.</i>	<i>Rs</i>	<i>As.</i>	<i>Rs</i>
BROAD GAUGE									
East Indian	30,48,309	1,507	2,287	4,471,979	1,539,570,462	2093.10	1332 80	10 92	1.09
Great Indian Peninsula	21,60,548	1,447	1,906	4,791,394	1,179,313,005	1493 41	1082 18	7 21	1 83
Sind, Punjab, and Delhi	7,80,798	663	706	1,393,722	1,176,78	1176 78	960 39	8 96	2 04
Madras	8,50,645	858	906	1,007,701	888,121,817	758 83	658 26	10 83	2 80
Bombay, Baroda, and Central India	6,45,974	443	516	971,749	283,141,340	1458 18	1183 10	10 64	1 95
Eastern Bengal	2,19,547	173	218	334,315	93,920,255	1269 05	1007 09	10 60	2 38
Oudh and Rohilkhand	5,24,864	547	628	754,100	224,551,943	959 79	635 45	11 13	2 33
Indus Valley and Kandahar	2,71,286	653	723	904,364	242,339,968	415.70	375 95	4 50	1 13
Punjab Northern	2,18,560	381	451	544,861	117,843,300	573 07	484 09	6 41	1 65
Patna Gya	21,292	57	63	77,388	15,899,744	373 24	388 40	4 40	1 38
Nizam's	37,098	117	127	150,498	29,235,329	321 93	307 75	4 01	1 29
TOTAL of all Broad Gauge Railways	86,79,547	6,846	8,830	16,462,071	4,388,198,378	1253 22	971 63	8 88	1 05
TOTAL, excluding East Indian Railway	55,31,238	5,339	6,543	10,990,092	2,848,667,916	1088 01	848 36	8 05	1.04
NARROW GAUGE.									
South Indian	3,33,734	641	703	667,052	94,508,209	504 74	469 77	7 77	3 43
Rajputana-Malwa *	5,06,638	1,066	1,184	2,086,150	303,094,655	559 32	503 64	4 68	1 97
Mysore	† 10,890	77	83	50,279	3,693,549	258 32	235.13	6 33	5 37
Nagpur and Chhattisgarh	89,208	98	108	111,906	18,054,353	400 08	303 03	5 90	2 17
Rangoon and Irrawaddy Valley	1,19,175	181	193	292,711	45,547,510	740 22	618 38	6 51	2 62
Northern Bengal	1,07,588	233	260	294,740	45,277,096	491 75	414 33	5 84	2 38
Tirhoot	84,610	83	96	125,660	14,516,781	415 48	358 54	4 41	2.38
Cawnpore-Farukhabad	28,919	86	96	71,715	12,127,700	334 31	301 70	6 45	2.39
Bhavnagar-Gondal	69,452	194	220	190,467	27,021,583	306 46	270 55	4 99	2.20
TOTAL of Narrow Gauge Railways	13,29,114	2,639	2,945	3,890,680	563,812,436	503 64	451 31	5 46	2 35

* Includes the Rajputana, and Holkar and Sindia-Neemuch State Railways

† This sum was charged to Capital.

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING (MAINTENANCE)—HALF-YEAR ENDING 31ST DECEMBER 1882.

From Statistics compiled in accordance with Public Works Department, Circular No 7 Railway, dated 17th February 1881.

0 61.

5 P 3

SELECT COMMITTEE ON EAST INDIAN RAILWAYS.

825

RAILWAYS	Cost of Maintenance.	Length of Lines Maintained	Length of Single Track, including Sidings	Total Train Mileage.	Gross Ton Mileage.	Per Mile of Line Maintained	Per Mile of Track, including Sidings	Per Total Train-Mile	Per 1,000 Gross Ton Mile
	<i>Rs</i>	<i>Miles</i>	<i>Miles</i>	<i>Miles</i>	<i>Miles</i>	<i>Rs.</i>	<i>Rs</i>	<i>As.</i>	<i>Rs.</i>
BROAD GAUGE									
East Indian - - - - -	35,27,568	1,507	2,319	4,585,027	1,517,508,465	2341.14	1621 16	12 81	2 32
Great Indian Peninsula - - - - -	20,88,966	1,447	1,099	3,822,372	728,305,647	1440 53	1042 68	10 03	2 86
Sind, Punjab, and Delhi - - - - -	5,77,405	603	796	1,291,301	342,504,920	870 33	725 00	7 15	1 68
Madras - - - - -	6,20,202	8.8	997	955,579	235,503,303	722 85	622 07	10 88	2 76
Bombay, Baroda, and Central India - - - - -	11,98,214	443	549	786,568	220,151,662	2701 16	2182 57	24 87	5 44
Eastern Bengal - - - - -	2 00,234	173	218	459,981	147,873,461	1157 42	918 50	6 97	1 35
Oudh and Rohilkhand - - - - -	4,39,776	547	628	625,095	182,960,030	804 20	699 78	11 26	2 70
Indus Valley and Kandahar - - - - -	4,45,479	661	732	944,509	271,969,427	674 85	608 00	7 55	1 64
Punjab Northern - - - - -	2,91,881	413	468	452,882	100,184,174	706 77	622 70	10 32	2 91
Patna-Gya - - - - -	20,232	57	63	80,991	15,625,645	353 70	321 53	3 99	1 30
Nizam's - - - - -	94,540	117	126	148,608	27,527,299	807 88	746 09	10 17	3 43
TOTAL of all Broad Gauge Railways - - - - -	94 90,467	6,866	8,995	18,658,008	8,759 908 658	1,879 53	1067 95	11 43	2 62
TOTAL, excluding East Indian Railway - - - - -	59,71,899	5,379	6,776	9,067,981	2,242,385,168	1,110 22	908 13	10 63	2 66
NARROW GAUGE.									
South Indian - - - - -	3,32,822	655	719	758,730	101,647,063	508 03	462 64	7 01	3 29
Rajputana-Malwa - - - - -	6,78,700	1,117	1,233	1,658,104	248,429,409	607.74	550 28	6 55	2 73
Mysore - - - - -	34,856	86	95	51,200	5,206,108	406 48	366 61	10 69	6 70
Nagpur and Chhattisgarh - - - - -	78,249	98	103	74,105	10,314,790	747 75	678 23	15 13	7.14
Rangoon and Irrawaddy Valley - - - - -	1,32,721	161	193	195,027	29,732,208	824 35	688 67	10 69	4 78
Northern Bengal - - - - -	1,16,810	230	257	320,350	50,915,918	507 90	455 03	5 83	2 28
Tirhoot - - - - -	39,908	79	92	118,791	14,340,023	505 18	432 70	5.28	2 78
Cawnpore-Farukhabad - - - - -	23 395	96	96	86,452	10,228,355	269 30	242 05	5 60	2.28
Bhavungar-Gondal - - - - -	67,931	133	219	101,959	13,451,487	851 97	310 54	10 66	5 05
TOTAL of Narrow Gauge Railways - - - - -	15,00,298	2,715	3,012	3,744,708	484,263,356	552 50	498 11	7.17	3 09

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING (MAINTENANCE)—HALF-YEAR ENDING 30TH JUNE 1883

From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881

RAILWAYS	Cost of Maintenance	Length of Lines Maintained	Length of Single Track, including Sidings	Total Train-Mileage	Gross Ton-Mileage	Per Mile of Line Maintained	Per Mile of Track, including Sidings	Per Total Train-Mile	Per 1,000* Gross Ton-Miles
	<i>Rs.</i>	<i>Miles</i>	<i>Miles</i>	<i>Miles</i>	<i>Miles</i>	<i>Rs</i>	<i>Rs</i>	<i>As.</i>	<i>Rs</i>
BROAD GAUGE.									
East Indian	86,81,292	1,653	2,487	5,413,889	1,870,268,852	2265 79	1505 85	10 84	1 99
Great Indian Peninsula	21,53,178	1,447	1,999	4,921,540	1,267,089,755	1488 36	1076 72	7 01	1 71
Sind, Punjab, and Delhi	7,53,249	688	823	1,589,057	469,592,507	1094 39	915 05	7 58	1 60
Madras	5,47,174	868	997	941,719	226,278,896	637 78	548 82	9 89	2 42
Bombay, Baroda, and Central India	7,58,071	461	559	1,130,889	396,373,993	1644 40	1356 14	10 83	1 91
Eastern Bengal	2,18,114	173	218	404,371	117,332,442	1260 77	1000 52	9 15	1 86
Oudh and Rohilkhand	3,43,882	547	628	723,638	206,017,430	638 84	547 37	7 60	1 67
Indus Valley and Kandahar	3,27,456	653	733	1,077,852	379,567,566	501 75	448 81	4 86	0 86
Punjab Northern	2,80,064	421	477	469,925	105,942,742	664 36	586 42	9 54	2 64
Patna Gja*	—	—	—	—	—	—	—	—	—
Nizam's	1,24,894	117	126	149,037	28,542,945	1066 56	986 44	13 41	4 36
TOTAL of all Broad Gauge Railways	91,87,859	7,018	9,047	16,811,317	5,066,005,127	1309 11	1016 51	8 74	1 81
TOTAL, excluding East Indian Railway	55,06,067	5,365	6,560	11,397,428	3,186,738,275	1026 99	839 33	7 72	1 72
NARROW GAUGE.									
South Indian	3,34,186	662	727	780,152	110,089,232	604 57	459 53	6 85	3 03
Rajputana-Malwa	6,34,719	1,118	1,237	2,401,833	416,124,215	667 58	513 14	4 23	1 53
Mysore	34,658	85	96	43,694	5,581,893	404 12	358 77	12 08	6 21
Nagpur and Chhattisgarh	81,345	149	164	251,523	47,252,091	545 94	498 43	5 17	1 72
Rangoon and Irrawaddy Valley	1,50,382	161	193	325,400	48,879,385	984 05	780 31	7 39	3 08
Northern Bengal	1,37,402	230	257	352,900	56,690,883	697 40	535 05	6 23	2 42
Tirhoot	53,837	148	168	193,498	21,791,453	355 81	3 3 89	4 37	2 43
Cawnpore-Farukhabad	24,058	86	96	67,418	10,301,671	278 13	249 98	5 71	2 21
Bhavnagar-Gondal	67,212	193	219	170,494	24,822,632	348 25	307 25	6 31	2 71
TOTAL of Narrow Gauge Railways	15,16,796	2,832	3,157	4,586,922	742,133,355	535 58	480 45	5 29	2 04

* This line is now worked by the East Indian Railway Company

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING—(MAINTENANCE).

GENERAL ABSTRACT

From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881

RAILWAYS	Cost of Maintenance	Length of Lines Maintained.	Length of Single Track, including Sidings	Total Train-Mileage	Gross Ton-Mileage	Per Mile of Lane Maintained	Per Mile of Track, including Sidings	Per Total Train-Mile	Per 1,000 Gross Ton-Miles
ALL BROAD GAUGE RAILWAYS.	<i>Rs</i>	<i>Miles</i>	<i>Miles</i>	<i>Miles</i>	<i>Miles</i>	<i>Rs</i>	<i>Rs.</i>	<i>As.</i>	<i>Rs.</i>
First half of 1881 - - - -	67,55,748	6,785	8,070	14,873,209	3,969,389,450	995 69	779 21	7 52	1 70
Second half of 1881 - - - -	73,21,829	6,821	8,717	13,603,631	3,767,101,133	1073 42	830 94	8 61	1 94
First half of 1882 - - - -	85,79,547	6,846	8,830	15,462,071	4,388,138,378	1253 22	971 03	8 88	1 95
Second half of 1882 - - - -	94,99,467	6,886	8,895	13,658,008	3,759,903,653	1379 53	1067 95	11 43	2 52
First half of 1883 - - - -	91,82,359	7,018	9,047	16,811,317	5,066,005,127	1309 11	1015 51	8 74	1 81
TOTAL - - -	4,13,43,950	34,366	44,159	73,903,286	20,950,537,741	1203 30	936 25	8 95	1 97
BROAD GAUGE RAILWAYS, EXCLUDING EAST INDIAN RAILWAY									
First half of 1881 - - - -	47,45,176	5,281	6,426	10,281,715	2,615,000,657	898 54	738 43	7 39	1 81
Second half of 1881 - - - -	49,78,615	5,314	6,497	9,384,590	2,301,527,443	936 88	769 84	8 51	2 16
First half of 1882 - - - -	55,31,238	5,339	6,543	10,990,092	2,848,567,916	1036 01	843 30	8 05	1 94
Second half of 1882 - - - -	59,71,899	5,379	6,576	9,067,981	2,242,395,168	1110 22	908 13	10 53	2 66
First half of 1883 - - - -	55,06,007	5,365	6,560	11,397,428	3,186,738,275	1026 29	839 33	7 72	1 72
TOTAL - - -	2,67,82,995	26,678	32,572	51,101,806	13,194,229,469	1002 06	820 73	8 37	2 02
NARROW GAUGE RAILWAYS									
First half of 1881 - - - -	13,39,084	2,371	2,652	3,268,393	460,661,633	564 75	504 01	3 55	2 91
Second half of 1881 - - - -	13,67,628	2,464	2,753	3,192,430	472,493,075	555 04	498 77	6 65	2 39
First half of 1882 - - - -	13,29,114	2,689	2,945	3,890,680	563,812,436	503 84	451 31	5 46	2 35
Second half of 1882 - - - -	15,00,398	2,715	3,012	3,344,708	484,263,356	552 59	498 11	7 17	3 09
First half of 1883 - - - -	15,16,796	2,332	3,157	4,586,922	742,133,355	535 58	480 45	5 29	2 04
TOTAL - - -	70,52,368	13,921	14,519	18,283,133	2,733,363,855	641 65	485 76	6 17	2 59

Calcutta, }
12 March 1884. }R A Sargeant, Major, &c,
Officiating Under Secretary to the Government of India,
Public Works Department, Railway

[Issue IV—No 8 A]

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING (TRAFFIC)—HALF-YEAR ENDING 30TH JUNE 1881

From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881

RAILWAYS	Traffic Expenses	Traffic Earnings.	Total Train-Mileage.	Per Total Train-Mile.	Per Cent. on Traffic Earnings
BROAD GAUGE.					
East Indian	Rs. 18,06,333	Rs. 2,21,23,346	Miles. 4,091,494	As 5 11	Per Cent. 5 90
Great Indian Peninsula	11,16,778	1,77,46,660	4,200,829	4 26	6 29
Sind, Punjab, and Delhi	5,84,413	50,77,525	1,441,084	5 93	10 52
Madras	3,23,083	31,30,069	957,296	5 40	10 32
Bombay, Baroda, and Central India	3,38,805	58,52,189	914,938	5 92	5 79
Eastern Bengal	2,42,042	17,16,574	915,121	12 28	14 10
Oudh and Rohilkhand	2,68,537	24,30,147	696,944	6 16	11 05
Indus Valley and Kandahar	3,50,969	26,12,488	912,580	6 31	13 78
Punjab Northern	2,10,371	16,73,977	648,598	5 21	11 25
Patra-Gya	19,698	2,43,039	57,262	5 50	8 10
Nizam's	48,313	3,68,917	128,057	6 04	12 43
TOTAL of all Broad Gauge Railway	47,68,840	6,31,94,901	14,373,209	5 31	7 54
TOTAL, excluding East Indian Railway	34,62,507	4,10,71,555	10,281,715	5 35	8 43
NARROW GAUGE					
South Indian	1,70,949	18,66,375	635,205	4 30	9 16
Rajputana	2,64,519	36,73,476	1,421,332	2 08	7 20
Holkar and Sindia-Neemuch	1,03,715	9,91,571	326,802	5 08	10 46
Nagpur and Chhattisgarh	24,243	1,52,477	51,025	7 60	15 90
Rangoon and Irrawaddy Valley	1,24,632	3,60,499	271,494	7 34	12 97
Northern Bengal	72,199	6,95,603	243,338	4 75	10 38
Tuhoor	31,879	2,58,499	32,215	6 20	12 33
Cawnpore-Farukhabad	14,384	1,13,261	64,070	3 54	12 65
Bhavnagar-Gondal	49,070	4,59,797	172,172	4 66	11 97
TOTAL of Narrow Gauge Railways	8,55,545	91,21,457	3,268,393	4 19	9 38

[Issue IV.—No 8 B]

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING (TRAFFIC).—HALF-YEAR ENDING 31ST DECEMBER 1881.

[From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881]

RAILWAYS.	Traffic Expenses	Traffic Earnings	Total Train Mileage.	Per Total Train Mile	Per Cent on Traffic Earnings
BROAD GAUGE	<i>Rs</i>	<i>Rs</i>	<i>Miles</i>	<i>As</i>	<i>Per Cent</i>
East Indian - - - - -	13,25,810	2,20,07,282	4,239,041	5 00	6 03
Great Indian Peninsula - - - - -	10,42,478	1,88,68,200	8,633,126	4 59	7 52
Sind, Punjab, and Delhi - - - - -	5,24,980	42,60,469	1,351,159	6 21	12 32
Madras - - - - -	3,29,715	29,98,265	964,620	5 47	11 00
Bombay, Baroda, and Central India - - - - -	2,92,762	36,65,406	751,838	6 23	7 99
Eastern Bengal - - - - -	3,04,908	33,40,917	428,559	11 87	9 13
Oudh and Rohilkhand - - - - -	2,02,609	21,56,043	627,681	6 69	12 18
Indus Valley and Kandabar - - - - -	2,72,302	24,27,655	921,766	4 73	11 22
Punjab Northern - - - - -	2,06,180	14,67,173	500,205	6 59	14 05
Patna Gya - - - - -	23,313	2,64,289	60,673	6 14	8 82
Nizam's - - - - -	49,649	3,50,230	124,843	6 36	14 18
TOTAL of all Broad Gauge Railways -	46,84,762	5,68,00,979	18,808,681	5 45	8 16
TOTAL, excluding East Indian Railway	33,08,946	3,47,93,697	9,364,590	5 65	9 51
NARROW GAUGE					
South Indian - - - - -	1,70,110	17,81,609	626,212	4 35	9 54
Rajputana - - - - -	2,97,399	34,72,130	1,474,189	3 24	8 59
Holkar and Sindia-Neemuch - - - - -	1,09,433	9,46,163	328,821	5 32	11 57
Nagpore Chhattisgarh - - - - -	24,792	1,24,381	43,056	9 21	19 94
Rangoon and Irrawaddy Valley - - - - -	98,926	5,65,955	175,790	8 55	16 59
Northern Bengal - - - - -	78,610	8,72,348	278,585	4 23	8 44
Tirhoot - - - - -	30,716	212,589	79,551	6 17	14 45
Cawnpore-Farukhabad - - - - -	19,148	163,018	68,250	4 48	11 74
Bhavnagar Gondal - - - - -	38,029	270,004	117,976	5 16	14 08
TOTAL of Narrow Gauge Railways -	8,57,158	84,08,147	3,192,430	4 29	10 19

[Issue IV.—No. 8 C]

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS.

COST OF WORKING (TRAFFIC) —HALF-YEAR ENDING 30TH JUNE 1882.

[From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881]

RAILWAYS.	Traffic	Traffic	Total Train	Per Total	Per Cent.
	Expenses	Earnings.	Mileage.	Train Mile	on Traffic Earnings
BROAD GAUGE.					
	<i>Rs</i>	<i>Rs</i>	<i>Miles.</i>	<i>As</i>	<i>Per Cent</i>
East Indian - - - - -	18,90,999	2,45,84,741	4,471,979	4 98	5 86
Great Indian Peninsula - - - - -	12,46,026	2,11,57,944	4,791,894	4 16	5 75
Sind, Punjab, and Delhi - - - - -	4,92,280	49,14,204	1,898,722	5 65	10 02
Madras - - - - -	3,38,885	34,09,498	1,007,701	5 30	9 79
Bombay, Baroda, and Central India - - - - -	3,36,207	60,16,715	971,749	5 58	5 59
Eastern Bengal - - - - -	2,58,049	19,12,099	384,815	12 34	18 48
Oudh and Rohilkhand - - - - -	2,75,895	28,24,552	754,100	5 84	9 75
Indus Valley and Kandahar - - - - -	2,40,898	22,08,810	984,384	4 00	10 91
Punjab Northern - - - - -	2,02,426	16,50,854	544,861	5 94	12 26
Patna-Gya - - - - -	21,598	2,87,862	77,388	4 47	7 50
Nizam's - - - - -	43,458	4,33,417	150,498	4 62	10 04
TOTAL of all Broad Gauge Railways -	48,41,161	6,94,91,348	15,462,071	5 01	6 98
TOTAL, excluding East Indian Railway	34,50,162	4,48,16,602	10,990,092	5 02	7 69
NARROW GAUGE.					
South Indian - - - - -	1,66,251	18,72,570	667,052	3 98	8 87
Rajputana-Malwa* - - - - -	4,26,825	61,74,737	2,086,150	3 27	6 91
Mysore - - - - -	11,977	1,29,264	50,279	3 81	9 26
Nagpur and Chhattisgarh - - - - -	36,603	4,06,692	111,906	5 23	9 00
Rangoon and Irrawaddy Valley - - - - -	1,89,371	9,48,235	292,711	7 62	14 70
Northern Bengal - - - - -	79,844	8,50,879	294,740	4 32	9 35
Tirhoot - - - - -	34,306	2,94,810	125,660	4 26	11 64
Cawnpore-Farukhabad - - - - -	22,341	1,91,986	71,715	4 98	11 64
Bhavnagar-Gondal - - - - -	56,285	5,75,414	190,467	4 73	9 78
TOTAL of Narrow Gauge Railways -	9,73,603	1,14,44,537	3,890,680	4 00	8 50

* Rajputana and Holkar and Sindia-Noemuch amalgamated, and called Rajputana-Malwa Railway.

[Issue IV.—No. 8 D]

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS.

COST OF WORKING (TRAFFIC).—HALF-YEAR ENDING 31ST DECEMBER 1882.

[From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881]

RAILWAYS.	Traffic Expenses.	Traffic Earnings.	Total Train Milesage	Per Total Tram Mile	Per Cent on Traffic Earnings.
BROAD GAUGE					
	<i>Rs</i>	<i>Rs</i>	<i>Miles</i>	<i>As</i>	<i>Per Cent.</i>
East Indian - - - - -	18,62,617	2,13,75,645	4,585,027	4 76	6 37
Great Indian Peninsula - - - - -	11,00,116	1,28,40,888	3,322,972	5 80	8 31
Sind, Punjab, and Delhi - - - - -	4,60,579	44,64,946	1,291,301	5 71	10 81
Madras - - - - -	3,56,577	33,31,808	955,579	5 97	10 70
Bombay, Baroda, and Central India - - - - -	3,10,117	39,51,446	786,563	6 31	7 82
Eastern Bengal - - - - -	3,34,307	36,07,137	459,981	11 62	9 26
Oudh and Rohilkhand - - - - -	2,52,402	20,78,123	625,095	6 46	12 17
Indus Valley and Kandahar - - - - -	2,39,760	24,09,154	944,509	4 06	9 95
Punjab Northern - - - - -	2,49,518	13,73,136	452,382	8 82	18 17
Patna-Gya - - - - -	22,730	2,52,427	80,991	4 49	9 01
Nizam's - - - - -	40,663	4,06,108	148,608	4 37	10 02
TOTAL of all Broad Gauge Railways -	47,20,339	5,00,85,218	18,658,008	5 54	8 43
TOTAL, excluding East Indian Railway	33,66 772	3,47,10,173	9,067,981	5 94	4 09
NARROW GAUGE.					
South Indian - - - - -	1,72,331	18,36,859	763,730	3 64	9 38
Rajputana-Malwa - - - - -	4,28,711	46,10,721	1,658,104	4 13	9 30
Mysore - - - - -	18,164	1,56,109	51,200	5 07	11 62
Nagpur and Chhattisgarh - - - - -	35,370	1,91,377	74,106	7 64	18 48
Rangoon and Irrawaddy Valley - - - - -	1,00,525	6,04,109	195,027	8 74	17 63
Northern Bengal - - - - -	77,460	9,59,080	320,350	3 87	8 08
Tirhoot - - - - -	34,688	2,63,486	118,781	4 67	13 17
Cawnpore-Farukhabad - - - - -	18,110	1,62,060	66,463	4 36	11 17
Bhavnagar-Gondal - - - - -	45,448	2,87,197	101,959	7 13	15 83
TOTAL of Narrow Gauge Railways -	9,36,797	90,70,998	3,344,708	4 48	10 32

[Issue IV—No. 8 E.]

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING (TRAFFIC)—HALF-YEAR ENDING 30TH JUNE 1883.

[From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881.]

RAILWAYS.	Traffic Expenses.	Traffic Earnings	Total Train Mileage.	Per Total Train Mile	Per Cent on Traffic Earnings
BROAD GAUGE					
	Rs	Rs	Miles	As	Per Cent
East Indian - - - - -	14,79,262	2,66,06,320	5,418,889	4 86	5 78
Great Indian Peninsula - - - - -	12,94,447	2,15,72,854	4,921,540	4 20	5 84
Sind, Punjab, and Delhi - - - - -	5,10,951	68,06,587	1,689,067	5 14	8 67
Madras - - - - -	3,50,425	32,81,488	941,719	5 95	10 68
Bombay, Baroda, and Central India - - - - -	3,73,574	70,46,132	1,120,389	5 84	5 27
Eastern Bengal - - - - -	2,00,097	25,22,847	404,271	11 88	11 90
Oudh and Rohilkhand - - - - -	2,73,408	26,66,806	723,888	6 05	10 25
Indus Valley and Kandahar - - - - -	2,39,970	36,41,548	1,077,852	3 56	6 59
Punjab Northern - - - - -	2,54,022	14,57,106	469,925	8 68	17 50
Patna-Gya * - - - - -	—	—	—	—	—
Nizam's - - - - -	43,379	4,18,274	149,037	4 66	10 37
TOTAL of all Broad Gauge Railways -	61,20,435	7,41,10,957	16,811,317	4 87	6 91
TOTAL, excluding East Indian Railway -	36,41,173	4,85,05,637	11,397,428	5 11	7 51
NARROW GAUGE					
	*	c			
South Indian - - - - -	1,89,543	18,86,424	780,152	3 48	8 99
Rajputana-Malwa - - - - -	4,85,332	69,08,636	2,401,833	3 21	7 07
Mysore - - - - -	15,859	1,37,102	43,694	5 81	11 57
Nagpur and Chhattisgarh - - - - -	56,394	9,74,907	251,533	3 59	5 78
Rangoon and Irrawaddy Valley - - - - -	1,38,243	9,52,132	325,400	6 55	13 99
Northern Bengal - - - - -	82,200	9,87,021	852,900	3 73	8 33
Tirhoot - - - - -	45,371	3,81,938	193,498	3 75	11 88
Cawnpore-Farukhabad - - - - -	28,092	1,89,768	67,418	6 48	12 17
Bhavnagar-Gondal - - - - -	60,374	5,79,345	170,494	5 67	10 42
TOTAL of Narrow Gauge Railways -	10,71,458	1,29,92,273	4,586,922	3 73	8 25

* The working of the line has been made over to the East Indian Railway Company from 1st May 1883.

[Issue IV—No 8 F]

ABSTRACT STATEMENT OF STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING (TRAFFIC)—GENERAL ABSTRACT.

[From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881.]

RAILWAYS.	Traffic Expenses	Traffic Earnings	Total Train Mileage.	Per Total Train Mile.	Per Cent on Traffic Earnings
ALL BROAD GAUGE RAILWAYS.	<i>Rs.</i>	<i>Rs</i>	<i>Miles</i>	<i>As.</i>	<i>Per Cent.</i>
First half of 1881 - - - -	47,68,840	6,81,94,901	14,272,209	5 31	7 54
Second half of 1881 - - - -	46,34,762	5,68,00,979	13,603,631	5 45	8 16
First half of 1882 - - - -	48,41,161	6,94,01,843	15,462,071	5 01	6 98
Second half of 1882 - - - -	47,29,389	6,60,85,218	13,653,008	5 54	8 43
First half of 1883 - - - -	51,20,435	7,41,10,957	16,811,317	4 87	6 91
TOTAL - - -	2,40,94,687	31,95,93,398	73,908,236	5 21	7·54
BROAD GAUGE RAILWAYS, EXCLUDING EAST INDIAN RAILWAY.					
First half of 1881 - - - -	34,62,507	4,10,71,555	10,281,715	5 35	8 43
Second half of 1881 - - - -	33,08,946	3,47,93,697	9,364,590	5 65	9 51
First half of 1882 - - - -	34,50,162	4,46,16,602	10,990,092	5 02	7 69
Second half of 1882 - - - -	33,66,772	3,47,10,173	9,007,981	5 94	9 69
First half of 1883 - - - -	36,41,173	4,85,05,637	11,397,428	5 11	7 51
TOTAL - - -	1,72,29,560	20,38,97,664	51,101,806	5·39	8 45
NARROW GAUGE RAILWAYS.					
First half of 1881 - - - -	8,55,545	91,21,457	3,268,393	4 19	9·38
Second half of 1881 - - - -	8,57,153	84,08,147	3,192,430	4 29	10 19
First half of 1882 - - - -	9,73,603	1,14,34,537	3,890,080	4 00	8 50
Second half of 1882 - - - -	9,36,797	90,70,998	3,344,708	4·48	10 32
First half of 1883 - - - -	10,71,456	1,29,92,273	4,586,922	3·73	8 25
TOTAL - - -	46,94,556	5,10,37,412	18,283,133	4 11	9 19

R A Sargeant, Major, R.E.,
 Officiating Under Secretary to the Government of India,
 Public Works Department, Railway Branch.

Calcutta, 10 March 1884

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING (LOCOMOTIVE).—HALF-YEAR ENDING 30TH JUNE 1881

[From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881]

RAILWAYS.	Locomotive Expenses.	Total Train Mileage.	Total Engine Mileage.	Gross Ton Mileage.	Per Total Train Mile	Per Engine Mile	Per 1,000 Gross Ton Miles
	Rs	Miles	Miles	Miles	As	As	Rs
BROAD GAUGE							
East Indian - - - - -	16,67,274	4,051,494	4,686,189	1,854,388,798	6 52	5 75	1 23
Great Indian Peninsula - - - - -	31,31,074	4,209,829	4,554,066	1,022,560,017	11 91	11 00	3 06
Sind, Punjab, and Delhi - - - - -	12,32,689	1,441,034	1,642,239	400,187,243	13 69	12 01	3 01
Madras - - - - -	6,09,410	957,296	1,104,564	209,027,890	11 19	9 69	3 20
Bombay, Baroda, and Central India - - - - -	7,77,874	914,986	1,026,370	305,436,975	13 60	12 13	2 54
Eastern Bengal - - - - -	2,16,180	315,121	388,671	84,295,647	10 97	8 69	2 56
Oudh and Rohilkhand - - - - -	4,92,571	690,944	608,298	201,634,353	11 36	9 79	2 45
Indus Valley and Kandahar - - - - -	8,88,970	912,586	1,068,464	223,801,268	15 59	13 31	3 97
Punjab Northern - - - - -	8,29,094	648,598	718,018	119,175,452	20 45	18 47	6 90
Patna-Gya - - - - -	44,757	57,262	63,280	12,812,455	12 50	11 32	3 49
Nizam's - - - - -	76,344	128,067	131,277	27,069,357	9 53	9 30	2 82
TOTAL of all Broad Gauge Railways - - - - -	1,00,26,237	14,373,209	16,141,356	3,969,389,450	11 16	9 94	2 52
TOTAL, excluding East Indian Railway - - - - -	83,58,963	10,281,715	11,505,217	2,615,000,657	13 06	11 62	3 19
NARROW GAUGE.							
South Indian - - - - -	4,48,892	635,295	794,134	94,294,456	11 29	9 04	4 72
Rajputana - - - - -	10,57,659	1,421,332	1,577,855	199,920,161	13 02	10 82	6 34
Holkar and Sindia-Neemuch - - - - -	2,58,914	326,802	373,495	44,093,371	12 68	11 09	5 87
Nagpur and Chhattisgarh - - - - -	35,304	51,025	54,170	6,761,674	11 06	10 40	5 20
Rangoon and Irrawaddy Valley - - - - -	1,56,356	271,494	321,295	42,890,686	9 21	7 78	3 64
Northern Bengal - - - - -	1,28,273	243,338	277,066	35,888,239	8 43	7 41	3 57
Tirhoot - - - - -	38,505	32,215	34,837	10,385,291	7 51	6 51	3 72
Cawnpore-Farukhabad - - - - -	25,746	34,670	39,334	7,150,013	6 37	5 94	3 60
Bhavnagar-Gondal - - - - -	95,027	172,173	177,516	19,277,742	8 83	8 57	4 93
TOTAL of Narrow Gauge Railways - - - - -	22,44,663	3,268,893	3,739,722	460,661,633	10 99	9 60	4 67

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS.

COST OF WORKING (LOCOMOTIVE).—HALF-YEAR ENDING 31ST DECEMBER 1881

[From Statistics compiled in accordance with Public Works Department Circular, No. 7 Railway, dated 17th February 1881.]

RAILWAYS	Locomotive Expenses	Total Train Mileage	Total Engine Mileage.	Gross Ton Mileage.	Per Total Train Mile	Per Engine Mile	Per 1,000 Gross Ton Miles
	<i>Rs.</i>	<i>Miles</i>	<i>Miles</i>	<i>Miles</i>	<i>As.</i>	<i>As.</i>	<i>Rs.</i>
BROAD GAUGE							
East Indian - - - - -	22,03,466	4,289,041	4,802,859	1,465,573,690	8 32	7 34	1 51
Great Indian Peninsula - - - - -	29,40,522	3,633,126	3,944,066	327,568,907	12 95	11 92	3 55
Sind, Punjab, and Delhi - - - - -	11,98,243	1,351,159	1,536,410	348,438,958	14 19	12 47	3 44
Madras - - - - -	6,56,432	964,620	1,107,799	212,106,028	10 88	9 48	3 09
Bombay, Baroda, and Central India - - - - -	6,59,686	751,838	832,390	214,795,661	14 04	12 68	3 07
Eastern Bengal - - - - -	3,65,200	428,659	527,435	135,910,489	13 63	11 08	2 09
Oudh and Rohilkhand - - - - -	4,77,044	627,881	796,761	181,736,718	12 16	10 36	2 62
Indus Valley and Kandahar - - - - -	7,78,648	931,766	1,068,310	241,867,762	13 52	11 72	3 22
Punjab Northern - - - - -	7,05,207	500,205	578,715	100,913,657	22 55	19 66	6 98
Patna Gya - - - - -	43,118	60,673	67,789	13,267,716	11 36	10 17	3 04
Nizam's - - - - -	66,870	124,643	127,233	24,891,547	8 54	8 38	2 67
TOTAL of all Broad Gauge Railways - - - - -	1,00,94,236	13,603,631	15,319,815	3,767,101,133	11 87	10 54	2 68
TOTAL, excluding East Indian Railway - - - - -	78,90,770	9,864,590	10,516,956	2,301,527,443	13 48	12 00	3 43
NARROW GAUGE.							
South Indian - - - - -	4,37,719	626,212	782,023	94,320,706	11 19	8 96	4 64
Rajputana - - - - -	10,71,198	1,474,189	1,623,012	215,198,551	11 78	10 70	5 04
Holkar and Sindia-Neemuch - - - - -	2,30,801	328,821	377,582	49,076,469	11 23	9 77	5 13
Nagpur and Chhattisgarh - - - - -	31,788	43,056	45,049	5,681,614	11 81	11 39	5 04
Rangoon and Irrawaddy Valley - - - - -	1,17,610	175,790	209,840	25,240,973	10 70	8 96	4 65
Northern Bengal - - - - -	1,40,267	278,565	310,793	44,823,559	8 06	7 22	3 13
Tirhoot - - - - -	88,326	79,551	97,784	9,760,926	7 71	6 27	3 32
Cawnpore-Farukhabad - - - - -	29,741	68,260	72,312	10,830,653	6 97	6 58	2 75
Bhavnagar-Gondal - - - - -	70,128	117,976	120,955	16,709,425	9 51	9 28	4 20
TOTAL of Narrow Gauge Railways - - - - -	21,67,578	3,192,430	3,639,650	472,493,075	10 86	9 53	4 59

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS

.COST OF WORKING (LOCOMOTIVE)—HALF-YEAR ENDING 30TH JUNE 1882

[From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881]

RAILWAYS.	Locomotive Expenses.	Total Train Mileage	Total Engine Mileage.	Gross Ton Mileage.	Per Total Train Mile.	Per Engine Mile.	Per 1,000 Gross Ton Miles
	<i>Rs</i>	<i>Miles.</i>	<i>Miles.</i>	<i>Miles</i>	<i>As</i>	<i>As</i>	<i>Rs.</i>
BROAD GAUGE.							
East Indian	23,89,915	4,471,079	5,081,119	1,530,570,462	8 88	7 37	1 52
Great Indian Peninsula	34,53,071	4,791,394	5,211,508	1,179,313,005	11 53	10 80	2 93
Sind, Punjab, and Delhi	13,79,297	1,393,722	1,584,771	383,121,817	14 68	12 93	3 83
Madras	8,77,049	1,007,701	1,163,168	232,141,340	10 75	9 32	2 92
Bombay, Baroda, and Central India	7,00,350	971,749	1,095,169	330,701,320	12 51	11 10	2 30
Eastern Bengal	2,20,837	334,315	418,839	93,920,253	11 00	8 79	2 45
Oudh and Rohilkhand	5,64,737	754,100	884,110	224,551,043	11 98	10 22	2 51
Indus Valley and Kandahar	7,16,042	904,364	1,090,664	242,339,983	11 88	10 50	2 95
Punjab Northern	6,30,671	544,861	624,218	117,843,200	18 50	16 15	5 34
Patna-Gya	89,817	77,388	85,422	15,339,744	8 13	7 36	2 55
Nizam's	37,166	150,405	154,722	29,285,329	7 14	6 95	2 30
TOTAL of all Broad Gauge Railways	1,07,56,802	15,462,071*	17,892,710	4,388,188,378	11 13	9 89	2 45
TOTAL, excluding East Indian Railway	84,16,887	10,990,092	12,311,591	2,848,567,916	12 25	10 94	2 95
NARROW GAUGE.							
South Indian	3,84,349	667,052	819,301	94,508,209	9 22	7 50	4 00
Rajputana-Malwa*	13,55,956	2,068,150	2,303,122	303,064,655	10 40	9 42	4 43
Mysore	14,366	50,279	62,441	3,698,549	11 50	9 28	9 84
Nagpur and Chhattagarrh	72,608	111,906	118,257	18,054,353	10 33	9 32	4 02
Rangoon and Irrawaddy Valley	1,48,623	292,711	316,603	45,547,510	8 18	7 07	3 26
Northern Bengal	1,51,393	294,740	341,208	45,277,096	8 22	7 10	3 34
Tirhoot	54,539	125,600	158,068	14,616,781	6 94	5 70	3 76
Cawnpore-Farukhabad	83,982	71,715	77,638	12,133,700	7 57	6 99	2 80
Bhavnagar-Gondal	86,809	190,467	194,197	27,021,568	7 29	7 15	3 21
TOTAL of Narrow Gauge Railways	23,02,875	3,890,680	4,404,832	563,812,436	9 47	8 36	4 08

* Rajputana and Holkar and Sodia-Neemuch amalgamated, and called Rajputana-Malwa Railway

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS.

COST OF WORKING (LOCOMOTIVE)—HALF-YEAR ENDING 31ST DECEMBER 1882

[From Statistics compiled in accordance with Public Works Department Circular, No. 7, Railway, dated 17th February 1881.]

RAILWAYS.	Locomotive Expenses.	Total Train Mileage.	Total Engine Mileage.	Gross Ton Mileage.	Per Total Train Mile.	Per Engine Mile.	Per 1,000 Gross Ton Miles.
	<i>Rs.</i>	<i>Miles</i>	<i>Miles.</i>	<i>Miles.</i>	<i>As.</i>	<i>As.</i>	<i>Rs.</i>
BROAD GAUGE.							
East Indian	20,66,889	4,585,027	5,187,407	1,517,508,485	7 20	8 44	1 27
Great Indian Peninsula	26,07,070	3,322,072	3,643,007	7,38,205,647	13 50	11 45	3 58
Sind, Punjab, and Delhi	11,45,577	1,201,301	1,489,223	342,604,020	14 19	12 48	8 34
Madras	6,70,792	955,579	1,103,137	235,603,303	11 38	9 86	3 01
Bombay, Baroda, and Central India	6,09,107	780,563	871,587	320,161,603	14 16	12 78	3 10
Eastern Bengal	2,59,013	459 981	572,247	147,872,461	9 00	7 24	1 75
Oudh and Rohilkhand	4,04,009	625,095	750,125	162,060,030	12 60	10 47	3 04
Indus Valley and Kandahar	5,78,226	944,609	1,069,830	271,059,427	9 88	8 66	2 18
Punjab Northern	4,80,409	453,382	523,023	100,184,174	10 99	14 54	4 79
Patna-Gya	30,020	80,991	88,961	15,695,045	7 11	6 49	2 33
Nizam's	63,173	148,698	161,913	27,627,299	6 80	6 68	3 29
TOTAL of all Broad Gauge Railways	91,27,581	13,653,008	16,450,168	3,760,903,663	10 69	9 45	3 42
TOTAL, excluding East Indian Railway	70,40,892	9,067,981	10,271,761	2,242,395,165	12 42	10 96	3 14
NARROW GAUGE.							
South Indian	4,18,385	756,780	917,572	101,647,063	8 82	7 30	4 12
Rajputana Malwa	14,99,689	1,658,404	1,840,241	248,429,400	11 58	10 38	4 88
Mysore	87,761	61,200	61,451	5,206,108	11 80	9 82	7 25
Nagpur and Chhattisgarh	66,679	74,105	78,771	10,814,790	11 63	10 04	5 23
Rangoon and Irrawaddy Valley	1,15,745	105,027	210,213	29,732,309	9 58	8 04	4 21
Northern Bengal	1,67,063	329,850	366,022	50,915,918	7 84	6 65	3 08
Tirhoot	57,716	118,781	151,650	14,340,623	7 77	6 97	4 02
Cawnpore-Furukhabad	80,506	66,452	69,743	15,296,355	7 35	7 00	3 98
Dharnagar-Gondal	87,995	101,959	104,950	13,431,487	9 09	8 83	4 31
TOTAL of Narrow Gauge Railways	21,36,742	3,344,708	3,910,237	484,203,266	10 23	8 90	4 42

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS.

WORKING EXPENSES (LOCOMOTIVE) — HALF-YEAR ENDING 30TH JUNE 1883.

[From Statistics compiled in accordance with Public Works Department Circular, No. 7, Railway, dated 17th February 1881.]

RAILWAYS.	Locomotive Expenses.	Total Train Mileage.	Total Engine Mileage.	Gross Ton Mileage.	Per Total Train Mile.	Per Engine Mile.	Per 1,000 Gross Ton Mile.
	Rs.	Miles.	Miles.	Miles.	As.	As.	Rs.
BROAD GAUGE.							
East Indian	20,80,978	5,418,899	6,047,788	1,879,268,852	6'18	5'56	1'13
Great Indian Peninsula	88,83,128	4,081,540	6,880,702	1,257,089,756	11'49	10'60	2'81
Sind, Punjab and Delhi.	18,92,490	1,589,057	1,797,764	469,592,697	14'09	13'39	2'98
Madras	6,48,057	941,719	1,088,584	226,278,895	7'08	9'48	2'85
Bombay, Baroda, and Central India	8,66,083	1,120,869	1,309,998	899,978,999	12'64	11'24	3'28
Eastern Bengal	2,45,697	404,271	405,978	117,892,449	9'72	7'77	2'09
Oudh and Rohilkhand	3,00,916	723,638	922,530	206,017,489	11'27	8'84	2'46
Indus Valley and Kandahar	8,14,960	1,077,832	1,210,241	379,567,566	12'10	10'77	2'16
Punjab Northern	4,99,078	469,925	513,987	103,942,722	12'68	14'39	4'61
Patin-Gya*							
Nisahn's	59,430	149,037	162,851	28,542,945	6'38	6'32	2'08
TOTAL of all Broad Gauge Railways	1,06,57,719	16,811,817	18,866,818	5,960,906,197	10'74	9'04	2'10
TOTAL, excluding East Indian Railway	85,76,741	11,397,428	12,818,030	3,186,738,976	12'04	10'70	3'62
NARROW GAUGE.							
South Indian	4,28,191	780,153	926,864	110,089,232	8'69	7'31	2'84
Rajputana-Malwa	16,45,140	2,401,883	2,637,898	418,124,216	10'60	9'66	3'23
Mysore	83,149	43,694	51,758	9,591,893	11'78	9'94	5'18
Nagpur and Chhattisgarh	1,49,979	251,888	263,945	47,252,091	9'54	9'02	3'17
Rangoon and Irrawaddy Valley	1,61,689	325,400	304,080	48,879,385	7'60	6'79	1'17
Northern Bengal	1,78,082	352,900	369,873	66,600,882	8'07	7'12	2'14
Tirhoot	69,183	103,498	286,241	21,791,458	7'27	6'04	1'69
Cawnpore-Farukhabad	35,126	67,418	70,943	10,901,571	8'34	7'92	3'22
Bhavnagar-Gondal	86,179	179,494	176,773	24,622,692	7'99	7'71	3'63
TOTAL of Narrow Gauge Railways	26,82,670	4,680,923	5,129,355	742,181,355	8'29	8'40	3'69

* This line is now worked by the East Indian Railway Company.

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS.

COST OF WORKING—LOCOMOTIVE
(GENERAL ABSTRACT)

Statistics compiled in accordance with Public Works Department Circular, No. 7, Railway, dated 17th February 1881.

RAILWAYS.	Locomotive Expenses.	Total Train Mileage.	Total Engine Mileage.	Gross Ton Mileage.	Per Total Train Mile.	Per Engine Mile.	Per 1,000 Gross Ton Mile.
	<i>Rs.</i>	<i>Miles.</i>	<i>Miles.</i>	<i>Miles.</i>	<i>As.</i>	<i>As.</i>	<i>Rs.</i>
ALL BROAD GAUGE RAILWAYS.							
First half of 1881	1,00,26,287	14,872,200	16,141,366	3,969,389,460	11 16	9 94	2 82
Second half of 1881	1,00,94,286	13,609,381	15,819,815	3,767,101,133	11 87	10 54	2 68
First half of 1882	1,07,58,802	15,482,071	17,392,710	4,388,138,273	12 23	9 89	2 45
Second half of 1882	91,27,681	13,663,098	15,469,156	3,789,903,653	10 69	9 45	2 42
First half of 1883	1,06,57,719	16,611,817	18,656,812	5,006,005,127	10 14	9 04	2 10
TOTAL	6,06,62,675	73,903,236	83,178,863	20,930,537,741	10 96	9 74	2 41
BROAD GAUGE RAILWAYS, EXCLUDING EAST INDIAN RAILWAY.							
First half of 1881	63,58,953	10,281,715	11,505,217	2,615,000,657	13 00	11 62	3 19
Second half of 1881	78,99,770	9,804,590	10,516,956	2,801,527,443	13 48	12 00	3 33
First half of 1882	84,16,887	10,990,092	12,311,591	2,848,567,916	12 26	10 94	2 95
Second half of 1882	70,40,892	9,087,981	10,271,751	2,242,395,168	12 42	10 98	3 14
First half of 1883	85,78,741	11,307,428	12,818,030	3,186,738,275	12 04	10 70	2 69
TOTAL	4,02,84,258	51,101,806	57,423,515	13,194,222,469	12 61	11 22	3 03
NARROW GAUGE RAILWAYS.							
First half of 1881	22,44,668	3,288,393	3,789,722	460,661,633	10 99	9 80	4 87
Second half of 1881	21,67,578	3,192,430	3,639,050	472,493,075	10 85	9 53	4 69
First half of 1882	23,02,875	3,890,660	4,404,833	563,812,436	9 47	8 86	4 08
Second half of 1882	21,88,742	3,344,708	3,816,283	484,293,356	10 23	9 56	4 42
First half of 1883	20,92,979	4,586,022	5,129,335	742,132,335	9 30	8 40	3 63
TOTAL	1,15,46,887	13,283,133	20,729,798	2,728,368,855	10 10	8 91	4 24

Calcutta,
10 March 1884.

R. A. Sargeant, Major, R. E.,
Officiating Under Secretary to the Government of India,
Public Works Department, Railway Branch

SELECTED STATISTICS OF THE INDIAN RAILWAYS. 339

[Issue IV—No. 10 A]

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS.

COST OF WORKING (CARRIAGE AND WAGON).—HALF YEAR ENDING 30TH JUNE 1881

[From Statistics compiled in accordance with Public Works Department Circular, No. 7, Railway, dated 17th February 1881]

RAILWAYS	Carriage and Wagon Expenses.	Total Train Mileage.	Vehicle Mileage Run by Horse Vehicles	Per Total Train Mile.	Per 1,000 Vehicle Miles Run by Horse Vehicles
	<i>Rs.</i>	<i>Miles.</i>	<i>Miles.</i>	<i>As.</i>	<i>Rs.</i>
BROAD GAUGE.					
East Indian	7,22,104	4,091,494	118,049,845	2 82	0 28
Great Indian Peninsula	12,32,161	4,209,820	89,739,301	4 68	13 73
Sind, Punjab, and Delhi	2,97,009	1,441,084	91,813,085	5 39	6 66
Madras	2,40,984	957,296	17,096,411	4 18	14 62
Bombay, Baroda, and Central India	2,01,980	914,988	29,406,241	3 58	12 39
Eastern Bengal	86,667	816,121	6,730,127	4 40	12 66
Oudh and Rohilkhand	1,21,388	606,944	21,717,439	2 78	5 58
Indus Valley and Kandahar	1,86,687	912,686	17,348,180	2 40	7 88
Punjab Northern	73,040	648,598	7,779,293	1 05	10 16
Patna Gaya	12,416	57,262	925,004	3 75	14 50
Nizam's	17,706	128,087	1,860,125	2 21	9 64
TOTAL of all Broad Gauge Railways	31,61,527	14,378,209	327,622,405	3 52	9 38
TOTAL, excluding East Indian Railway	24,39,428	10,281,715	224,473,100	3 79	10 67
NARROW GAUGE.					
South Indian	1,16,087	635,295	12,707,636	2 01	16 46
Hypotans	1,19,184	1,421,382	27,619,264	1 43	3 30
Holkar and Sindia-Necmud	49,408	326,802	6,705,612	2 42	7 32
Nagpur and Chhathagarh	8,896	51,023	1,104,404	2 78	8 06
Rangoon and Irrawaddy Valley	21,991	271,494	6,119,448	1 29	3 59
Northern Bengal	18,014	249,338	5,177,646	1 26	3 02
Tirhoot	6,961	82,216	1,551,503	1 30	4 43
Cawnpore-Farukhabad	2,494	54,670	1,157,055	0 62	2 16
Bhavnagar-Gondal	10,173	172,172	3,081,925	0 66	3 30
TOTAL of Narrow Gauge Railways	3,53,749	3,268,393	65,224,491	1 73	5 42

[Lanc IV.—No. 10 B.]

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS.

COST OF WORKING (CARRIAGE AND WAGON)—HALF-YEAR ENDING 31ST DECEMBER 1881.

[From Statistics compiled in accordance with Public Works Department Circular, No. 7, Railway, dated 17th February 1881.]

RAILWAYS.	Carrriage and Wagon Expenses.	Total Train Mileage.	Vehicle Mileage Run by Home Vehicles	Per Total Train Mile.	Per 1,000 Vehicle Miles Run by Home Vehicles.
BROAD GAUGE.					
East Indian	<i>Rs.</i> 7,85,240	<i>Miles.</i> 4,239,041	<i>Miles.</i> 115,502,687	<i>As.</i> 2.78	<i>Rs.</i> 6.37
Great Indian Peninsula	10,55,134	3,633,126	72,364,624	4.77	14.90
Sind, Punjab, and Delhi	3,83,468	1,351,159	36,558,980	4.64	10.49
Madras	2,84,881	964,620	10,827,794	3.00	13.95
Bombay, Baroda, and Central India	2,86,578	751,838	20,305,071	5.04	11.65
Eastern Bengal	1,19,890	428,659	11,097,341	4.08	22.27
Oudh and Rohilkhand	1,61,675	627,681	21,587,120	4.10	7.46
Jales Valley and Kanduher	81,872	621,789	14,694,901	1.42	5.91
Punjab Northern	74,347	500,265	8,135,580	2.37	9.14
Putna-Gya	6,499	60,673	1,000,727	2.24	8.49
Nizam's	36,286	124,813	24,991,547	4.65	18.71
TOTAL of all Broad Gauge Railways	31,47,705	18,903,681	342,866,981	3.70	9.18
TOTAL, excluding East Indian Railway	24,12,353	9,304,390	227,868,664	4.12	10.01
NARROW GAUGE					
South Indian	1,20,004	626,219	12,327,032	3.08	16.50
Rajputana	1,63,853	1,474,189	30,183,782	1.76	6.36
Holkar and Sindia-Nesmuch	52,177	328,821	6,208,516	2.54	8.41
Nagpur and Chhattisgarh	10,126	43,056	882,493	3.76	11.47
Rangoon and Irrawaddy Valley	27,101	176,790	3,764,780	2.47	7.83
Northern Bengal	21,480	278,583	6,748,922	1.23	3.15
Tirhoot	7,486	79,551	1,428,511	1.61	3.24
Cawnpore Farukhabad	2,090	68,250	1,737,768	0.49	1.19
Bhavnagar-Gondal	11,347	117,975	1,339,830	1.54	5.47
TOTAL of Narrow Gauge Railways	4,06,382	3,193,433	64,581,232	2.93	6.20

[Issue IV—No 10 C]

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING (CARRIAGE AND WAGON)—HALF-YEAR ENDING 30TH JUNE 1882

[From Statistics compiled in accordance with Public Works Department Circular, No 7, Railway, dated 17th February 1881.]

RAILWAYS	Carrriage and Wagon Expenses.	Total Train Mileage	Vehicle Mileage Run by Home Vehicles	Per Total Train Mile	Per 1,000 Vehicle Miles Run by Home Vehicles
	<i>Rs</i>	<i>Miles</i>	<i>Miles</i>	<i>As</i>	<i>Rs</i>
BROAD GAUGE.					
East Indian - - - - -	7,32,566	4,471,979	124,255,754	2 62	5 00
Great Indian Peninsula - - - -	18,60,548	4,791,394	*100,241,987	4 54	13 57
Sind, Punjab, and Delhi - - - -	3,91,044	1,393,722	34,927,650	4 48	11 19
Madras - - - - -	3,23,927	1,007,701	19,007,414	5 14	17 04
Bombay, Baroda, and Central India - -	2,81,718	971,749	30,724,981	4 64	9 17
Eastern Bengal - - - - -	85,899	334,316	7,709,968	4 10	11 07
Oudh and Rohilkhand - - - - -	1,66,113	754,100	23,325,721	3 52	7 12
Indus Valley and Kandahar - - - -	1,01,046	964,364	17,083,055	1 68	5 91
Punjab Northern - - - - -	86,438	544,861	8,664,316	2 50	9 86
Patna Gya - - - - -	8,047	77,388	1,123,329	1 66	7 16
Nizam's - - - - -	21,165	150,498	2,158,240	2 25	9 81
TOTAL of all Broad Gauge Railways -	35,57,059	15,462,071	369,221,990	3 68	9 63
TOTAL, excluding East Indian Railway	28,24,493	10,990,092	244,966,216	4 11	11 53
NARROW GAUGE.					
South Indian - - - - -	1,11,933	667,052	11,931,171	2 63	16 20
Rajputana-Malwa † - - - - -	2,20,702	2,086,150	43,706,324	1 69	5 50
Mysore - - - - -	4,380	50,279	420,141	1 39	10 42
Nagpur and Chhattisgarh - - - -	17,678	111,906	2,772,569	2 52	6 28
Rangoon and Irrawaddy Valley - - -	26,324	292,711	6,719,901	1 38	177
Northern Bengal - - - - -	25,292	294,740	6,743,552	1 87	37
Tirhoot - - - - -	8,932	126,660	2,215,625	1 13	4 03
Cawnpore-Farukhabad - - - - -	5,971	71,715	1,965,543	1 33	3 04
Bhavnagar-Gondal - - - - -	16,084	190,467	4,145,050	1 35	3 88
TOTAL of Narrow Gauge Railways -	4,38,296	3,890,630	80,620,281	1 79	5 41

* Includes the mileage of foreign vehicles on home line, the details of which have not been separately recorded.

† Includes the Rajputana and Holkar and Sindia-Neemuch State Railways

[Issue IV.—No 10 D]

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING (CARRIAGE AND WAGON).—HALF-YEAR ENDING 31ST DECEMBER 1882.

[From Statistics compiled in accordance with Public Works Department Circular, No 7, Railway, dated 17th February 1881.]

RAILWAYS.	Carriage and Wagon Expenses.	Total Train Mileage.	Vehicle Mileage Run by Home Vehicles.	Per Total Train Mile.	Per 1,000 Vehicle Miles Run by Home Vehicles.
	Rs.	Miles	Miles.	As.	Rs.
BROAD GAUGE.					
East Indian	7,40,933	4,585,027	118,740,876	2.59	6.24
Great Indian Peninsula	18,71,165	3,322,079	62,560,557	6.60	21.91
Sind, Punjab, and Delhi	3,32,038	1,291,301	34,411,406	4.11	8.65
Madras	1,92,668	955,579	18,151,195	3.23	10.61
Bombay, Baroda, and Central India	2,61,925	786,568	20,274,322	5.33	12.93
Eastern Bengal	73,256	459,981	12,312,677	2.55	6.93
Oudh and Rohilkhand	1,53,048	625,095	16,964,701	3.92	8.07
Indus Valley and Kandahar	98,578	944,509	16,165,108	1.67	6.10
Punjab Northern	76,320	452,382	8,892,383	2.70	6.56
Patna-Gya	10,911	80,991	1,264,187	2.16	6.63
Nishan's	21,266	148,608	1,619,562	2.28	22.12
TOTAL of all Broad Gauge Railways	32,32,123	13,653,008	312,577,086	3.29	10.63
TOTAL, excluding East Indian Railway	26,91,190	9,067,981	214,836,160	4.57	12.06
NARROW GAUGE.					
South Indian	1,26,615	738,730	12,623,730	2.67	10.65
Rajputana-Malwa	1,73,815	1,066,104	34,265,860	1.66	5.07
Mysore	5,121	61,200	708,521	1.60	2.23
Nagpur and Chhattisgarh	26,548	74,105	1,534,537	5.73	17.20
Rangoon and Irrawaddy Valley	23,284	195,027	4,172,563	1.89	5.24
Northern Bengal	26,347	390,330	7,335,267	1.97	3.23
Tirhoot	16,478	118,781	2,151,596	2.32	7.66
Cawnpore-Farukhabad	1,183	66,453	1,686,937	6.28	0.89
Bhavnagar-Gondal	14,599	101,959	2,133,467	2.22	6.64
TOTAL of Narrow Gauge Railways	4,12,176	2,844,708	67,111,476	1.97	6.14

[Issue IV—No 10 E]

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING (CARRIAGE AND WAGON)—HALF-YEAR ENDING 30TH JUNE 1911

[For Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1911.]

RAILWAYS	Carrriage and Wagon Expenses	Total Train Mileage	Vehicle Mileage Run by Horse Vehicles	Per Total Train Mile	Per 1,000 Vehicle Miles Run by Horse Vehicle
	• Rs	Miles	Miles	Rs	Rs
BROAD GAUGE					
East Indian - - - - -	7,93,973	5,413,880	141,557,396	2 34	72
Great Indian Peninsula - - - - -	13,72,906	4,921,540	94,007,409	4 47	14 60
Coast, Punjab, and Delhi - - - - -	3,56,398	1,589,057	40,702,361	3 59	9 70
Madras - - - - -	3,19,333	941,719	18,466,594	5 43	17 29
Bombay, Baroda, and Central India - - - - -	3,47,703	1,120,389	35,002,807	4 07	9 01
Eastern Bengal - - - - -	2,82,821	404,271	9,490,413	4 06	12 98
Ooch and Rohilkhand - - - - -	1,70,479	723,638	25,797,510	3 77	6 51
Indus Valley and Kandahar - - - - -	1,80,771	1,077,852	22,838,423	2 03	5 09
Punjab Northern - - - - -	75,183	460,925	12,731,823	2 56	5 60
Patna Gya* - - - - -	—	—	—	—	—
Nizam's - - - - -	41,558	149,037	1,894,811	4 46	21 93
TOTAL of all Broad Gauge Railways	38,93,787	16,811,317	402,555,542	3 71	9 65
TOTAL, excluding East Indian Railway	31,03,714	11,397,428	261,028,246	4 35	11 88
NARROW GAUGE					
South Indian - - - - -	1,39,800	780,152	13,328,852	2 86	10 11
Rajputana Malwa - - - - -	2,54,528	2,401,833	55,604,420	1 74	4 1
Mysore - - - - -	8,200	43,694	710,951	3 01	11
Nagpur and Chhattisgarh - - - - -	37,219	251,533	6,057,977	2 36	5 33
Burghoon and Irrawaddy Valley - - - - -	42,168	325,400	7,348,090	2 07	5 74
Northern Bengal - - - - -	27,534	352,900	8,817,578	1 23	12
Luhoot - - - - -	16,050	193,498	3,240,425	1 31	4 95
Cawnpore Farukhabad - - - - -	5,216	67,418	1,712,223	1 24	—
Bhavnagar-Gondal - - - - -	20,188	170,494	4,150,566	1 59	4 51
TOTAL of Narrow Gauge Railways	5,50,368	4,598,922	102,080,388	1 00	5

* The line is now worked by the East Indian Railway Company

[Issue IV—No 10 F]

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING (CARRIAGE AND WAGON)

GENERAL ABSTRACT

[From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881]

RAILWAYS	Carrriage and Wagon Expenses.	Total Tram Mileage.	Vehicle Mileage Run by Home Vehicles.	Per Total Tram Mile	Per 1,000 Vehicle Miles Run by Home Vehicles.
ALL BROAD GAUGE RAILWAYS					
First Half of 1881 - - - -	Rs 31,61,527	Miles 14,373,209	Miles. 337,522,495	Rs. 3 52	Rs. 9 36
Second Half of 1881 - - - -	31,47,795	13,603,631	342,866,381	3 70	9 18
First Half of 1882 - - - -	35,57,059	15,462,071	369,321,990	3 68	9 63
Second Half of 1882 - - - -	33,32,123	13,653,008	313,577,036	3 90	10 62
First Half of 1883 - - - -	38,98,787	16,811,817	402,585,642	3 71	9 68
TOTAL - - -	1,70,97,291	73,903,236	1,765,773,544	3 70	9 68
BROAD GAUGE RAILWAYS, EXCLUDING EAST INDIAN RAILWAY					
First Half of 1881 - - - -	Rs 24,39,423	Miles 10,281,715	Miles. 224,473,150	Rs. 3 79	Rs. 10 67
Second Half of 1881 - - - -	24,12,555	9,364,590	227,363,694	4 12	10 61
First Half of 1882 - - - -	28,24,493	10,990,092	244,966,236	4 11	11 53
Second Half of 1882 - - - -	25,91,190	9,067,981	214,836,160	4 57	12 06
First Half of 1883 - - - -	31,03,114	11,397,428	261,028,246	4 35	11 88
TOTAL - - -	1,33,70,775	51,101,806	1,172,667,486	4 18	11 40
NARROW GAUGE RAILWAYS					
First Half of 1881 - - - -	Rs 3,53,749	Miles 3,268,393	Miles. 65,224,491	Rs. 1 73	Rs. 5 42
Second Half of 1881 - - - -	4,06,282	3,192,430	64,581,333	2 03	6 29
First Half of 1882 - - - -	4,36,296	3,890,660	80,620,281	1 79	5 41
Second Half of 1882 - - - -	4,12,170	3,344,708	67,111,470	1 97	6 14
First Half of 1883 - - - -	5,50,898	4,586,922	102,080,388	1 92	5 39
TOTAL - - -	21,59,365	18,283,133	379,617,868	1 68	5 68

Calcutta, 15 March 1884

R. A. Sargeant, Major, R.E.,
 Officiating Under Secretary to the Government of India,
 Public Works Department, Railway Branch.

[Issue IV —No. 11 A]

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING (GENERAL CHARGES).—HALF-YEAR ENDING 30TH JUNE 1881.

[From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881]

RAILWAYS	General Charges.	Gross Earnings	Total Train Mileage	Per Total Train Mile	Per Cent on Total Earnings
BROAD GAUGE					
	<i>Rs.</i>	<i>Rs</i>	<i>Miles</i>	<i>As</i>	<i>Per Cent</i>
East Indian - - - - -	8,59,415	2,28,07,254	4,061,494	3 36	3 77
Great Indian Peninsula - - - - -	5,42,380	1,79,91,643	4,200,829	2 07	3 01
Sind, Punjab, and Delhi ¹ - - - - -	3,40,848	55,81,461	1,441,034	3 78	6 16
Madras - - - - -	2,26,353	32,27,307	957,296	3 78	7 01
Bombay, Baroda, and Central India - - - - -	2,33,594	60,02,372	914,988	4 08	3 89
Eastern Bengal - - - - -	1,51,577	19,13,346	315,121	7 69	7 92
Ondh and Rohilkhand - - - - -	1,92,032	25,65,234	696,944	4 41	7 48
Indus Valley and Kandahar - - - - -	2,16,519	28,62,050	912,586	3 80	7 57
Punjab Northern - - - - -	1,06,555	19,29,663	648,598	2 69	5 52
Patna Gya - - - - -	23,041	2,46,467	57,262	6 44	9 85
Nizam's - - - - -	32,460	3,98,286	128,057	4 06	6 16
TOTAL of all Broad Gauge Railways -	29,24,724	6,54,76,183	14,373,209	3 25	4 47
TOTAL, excluding East Indian Railway	20,65,809	4,26,68,929	10,291,715	3 21	4 34
NARROW GAUGE.					
South Indian - - - - -	1,66,010	19,11,880	635,295	4 18	3 68
Rajputana - - - - -	2,06,162	37,19,166	1,421,382	2 32	5 54
Holkar and Sindia-Neemuch - - - - -	70,126	9,92,633	326,802	3 43	7 06
Nagpur and Chhatuagarh - - - - -	21,139	1,54,517	51,625	6 61	13 69
Rangoon and Irrawaddy Valley - - - - -	62,584	9,69,510	271,494	3 68	6 45
Northern Bengal - - - - -	80,096	8,18,343	243,336	5 33	9 90
Trhoot - - - - -	30,066	3,12,527	82,215	5 56	9 63
Cawnpore-Farukhabad - - - - -	20,846	1,14,265	64,670	5 03	17 89
Bhavnagar-Gondal - - - - -	55,722	4,14,337	172,173	5 17	13 45
TOTAL of Narrow Gauge Railways -	7,13,163	94,07,118	3,268,393	3 49	7 58

[Issue IV—No 11 B]

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING (GENERAL CHARGES)—HALF-YEAR ENDING 31ST DECEMBER 1881

[From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881]

RAILWAYS	General Charges	Gross Earnings	Total Train Mileage	Per Total Train Mile	Per Cent. on Total Earnings
BROAD GAUGE.					
	<i>Rs</i>	<i>Rs</i>	<i>Miles.</i>	<i>As.</i>	<i>Per Cent.</i>
East Indian - - - - -	8,67,593	2,26,04,218	4,239,041	3 27	8 54
Great Indian Peninsula - - - - -	5,40,360	1,40,65,180	3,633,126	2 40	3 88
Sind, Punjab, and Delhi - - - - -	3,33,624	46,42,686	1,351,159	3 95	7 18
Madras - - - - -	2,23,942	30,83,506	964,620	3 71	7 26
Bombay, Baroda, and Central India - - - - -	2,40,477	37,42,160	751,836	5 12	6 42
Eastern Bengal - - - - -	1,54,520	37,88,696	428,659	5 76	4 08
Oudh and Rohilkhand - - - - -	1,98,289	23,63,497	627,681	5 05	8 38
Indus Valley and Kandahar - - - - -	2,03,153	26,73,111	921,786	3 58	7 60
Punjab Northern - - - - -	1,23,026	15,39,901	500,205	3 93	7 99
Patna Gya - - - - -	20,326	2,66,964	60,673	6 36	7 61
Nizam s - - - - -	28,868	358,548	124,843	3 70	8 05
TOTAL of all Broad Gauge Railways -	29,40,168	5,91,28,467	18,603,681	3 45	4 97
TOTAL, excluding East Indian Railway	20,72,575	3,65,24,249	8,364,590	3 54	5 67
NARROW GAUGE.					
South Indian - - - - -	1,55,880	18,43,858	626,212	3 97	8 48
Rajputana - - - - -	2,06,721	35,28,090	1,474,189	2 25	5 89
Holkar and Sindia Neemuch - - - - -	71,390	9,56,946	328,821	3 47	7 46
Nagpur and Chhattisgarh - - - - -	22,917	1,27,012	43,056	3 18	17 38
Rangoon and Irrawaddy Valley - - - - -	56,405	5,74,112	175,796	5 13	9 82
Northern Bengal - - - - -	79,829	10,25,546	278,585	4 56	7 73
Tirhoot - - - - -	25,966	2,71,727	79,551	5 22	9 56
Cawnpore Farukhabad - - - - -	40,618	1,64,320	68,250	9 52	24 71
Bhavnagar-Gondal - - - - -	63,715	2,74,048	117,976	7 29	19 60
TOTAL of Narrow Gauge Railways -	7,11,541	87,60,659	3,192,430	3 56	8 01

[Issue IV—No. 11 C]

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS.

COST OF WORKING (GENERAL CHARGES)—HALF-YEAR ENDING 30TH JUNE 1882.

[From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881.]

RAILWAYS	General Charges.	Gross Earnings	Total Train Mileage	Per Total Train Mile	Per Cent. on Total Earnings
BROAD GAUGE					
	<i>Rs</i>	<i>Rs</i>	<i>Miles</i>	<i>As.</i>	<i>Per Cent</i>
East Indian - - - - -	8,40,788	2,52,06,227	4,471,979	3 08	3 86
Great Indian Peninsula - - - - -	5,61,547	2,14,11,628	4,791,394	1 88	2 56
Sind, Punjab, and Delhi - - - - -	8,83,244	52,14,400	1,398,722	3 85	6 43
Madras - - - - -	2,29,869	35,02,064	1,007,701	3 65	6 56
Bombay, Baroda, and Central India - - - - -	2,72,463	61,39,952	971,749	4 49	4 44
Eastern Bengal - - - - -	1,53,712	21,17,518	334,315	7 35	7 26
Oudh and Rohilkhand - - - - -	1,05,714	30,01,470	754,100	4 15	6 52
Indus Valley and Kandahar - - - - -	1,84,091	24,07,739	964,364	3 05	7 65
Punjab Northern - - - - -	1,24,172	16,97,068	544,861	3 64	7 31
Patna-Gya - - - - -	22,387	2,91,152	77,388	4 63	7 69
Nizam's - - - - -	31,806	4,44,564	150,498	3 33	7 15
TOTAL of all Broad Gauge Railways -	29,57,793	7,14,33,882	15,462,071	3 07	4 14
TOTAL, excluding East Indian Railway	21,11,006	4,62,27,655	10,990,092	3 07	4 56
NARROW GAUGE					
South Indian - - - - -	1,52,932	19,00,227	667,052	3 07	3 06
Rajputana-Malwa (*) - - - - -	2,97,777	62,66,590	2,086,150	2 29	4 77
Mysore - - - - -	10,723	1,29,997	50,279	3 40	8 25
Nagpur-Chhattisgarh - - - - -	27,355	4,10,265	111,906	3 91	6 67
Rangoon and Irrawaddy Valley - - - - -	56,056	9,60,973	292,711	3 06	5 83
Northern Bengal - - - - -	93,565	9,98,202	294,740	5 08	9 37
Tirhoot - - - - -	27,703	3,48,553	125,660	3 32	3 06
Cawnpore Farukhabad - - - - -	46,026	1,94,754	71,715	3 91	20 55
Bhavnagar-Gondal - - - - -	51,380	5,82,185	190,467	4 32	3 83
TOTAL of Narrow Gauge Railways -	7,87,517	1,17,86,746	3,890,680	3 11	6 42

* Rajputana and Holkar and Sindia-Neemuch amalgamated, and called Rajputana-Malwa Railway

[Issue IV—No 11 D]

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS,

COST OF WORKING (GENERAL CHARGES)—HALF-YEAR ENDING 31ST DECEMBER 1882

[From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881]

RAILWAYS	General Charges	Gross Earnings	Total Train Mileage	Per Total Train Mile.	Per Cent on Total Earnings
BROAD GAUGE.					
	<i>Rs</i>	<i>Rs</i>	<i>Miles.</i>	<i>As</i>	<i>Per Cent</i>
East Indian - - - - -	8,55,041	2,19,11,367	4,685,027	2 99	8 90
Great Indian Peninsula - - - - -	5,56,991	1,30,50,908	3,322,973	2 68	4 14
Sind, Punjab, and Delhi - - - - -	3,33,326	48,17,384	1,291,301	4 18	6 92
Madras - - - - -	2,27,791	84,16,507	955,579	3 81	6 67
Bombay, Baroda, and Central India - - - - -	2,80,257	40,36,227	786,568	5 70	8 94
Eastern Bengal - - - - -	1,55,267	40,08,207	459,981	5 40	3 87
Oudh and Rohilkhand - - - - -	1,90,493	22,61,373	625,095	4 88	8 42
Indus Valley and Kandahar - - - - -	1,59,804	27,04,321	944,609	2 71	5 91
Punjab Northern - - - - -	1,12,501	14,33,444	452,382	3 98	7 85
Patna-Gya - - - - -	21,865	2,55,012	80,991	4 32	8 57
Nizam's - - - - -	29,083	4,14,854	148,608	3 14	7 01
TOTAL of all Broad Gauge Railways -	29,22,419	5,63,10,549	13,653,068	3 42	5 01
TOTAL, excluding East Indian Railway	20,67,378	3,63,09,182	9,067,981	3 65	5 68
NARROW GAUGE					
South Indian - - - - -	1,53,550	18,58,487	758,730	3 24	8 26
Rajputana-Malwa - - - - -	3,20,750	46,78,040	1,658,104	3 10	6 87
Mysore - - - - -	23,058	1,58,393	51,200	7 20	14 56
Nagpur and Chhattisgarh - - - - -	31,472	1,94,122	74,105	6 80	16 21
Rangoon and Irrawaddy Valley - - - - -	63,805	6,14,717	195,027	5 23	10 38
Northern Bengal - - - - -	84,007	11,47,708	320,350	4 20	7 32
Tirhoot - - - - -	29,570	3,16,468	118,781	3 98	9 34
Cawnpore-Farukhabad - - - - -	86,950	1,64,057	66,452	8 90	22 52
Bhavnagar Gondal - - - - -	63,258	2,94,651	101,959	9 93	21 47
TOTAL of Narrow Gauge Railways -	8,06,430	94,31,648	3,344,708	3 86	8 50

[Issue IV.—No. 11 E]

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS.

COST OF WORKING (GENERAL CHARGES)—HALF-YEAR ENDING 30TH JUNE 1883

[From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881]

RAILWAYS	General Charges	Gross Earnings	Total Train Mileage.	Per Total Train Mile	Per Cent on Total Earnings
BROAD GAUGE.					
East Indian - - - - -	Rs 8,86,107	Rs 2,61,71,262	Miles. 5,413,889	As. 2'61	Per Cent 8 39
Great Indian Peninsula - - - - -	8,68,684	2,18,20,892	4,921,640	1 88	2 52
Sind, Punjab, and Delhi - - - - -	3,38,659	62,71,216	1,589,057	8'41	5 40
Madras - - - - -	2,27,348	83,65,901	941,719	3 86	6 75
Bombay Baroda, and Central India - - - - -	2,57,219	71,67,624	1,120,399	3 67	3 59
Eastern Bengal - - - - -	1,65,582	27,58,262	404,271	6 55	6 00
Oudh and Rohilkhand - - - - -	2,01,896	29,32,006	723,688	4 46	6 87
Indus Valley and Kandahar - - - - -	1,57,662	39,88,150	1,077,652	2'84	3 95
Punjab Northern - - - - -	1,25,072	15,87,051	469,925	4'26	7 88
Patna-Lya * - - - - -	—	—	—	—	—
Nizam's - - - - -	30,069	4,27,921	149,037	3 22	7 01
TOTAL of all Broad Gauge Railways -	29,52,788	7,64,80,895	16,811,317	2 31	3 86
TOTAL, excluding East Indian Railway	20,66,681	5,03,09,633	11,397,428	2 90	4 18
NARROW GAUGE.					
South Indian - - - - -	1,64,604	13,14,955	780,152	3 37	6 59
Rajputana Malwa - - - - -	3,29,051	69,68,851	2,401,833	2 24	4 74
Mysore - - - - -	22,220	1,39,555	43,694	6 12	15 92
Nagpur and Chhattisgarh - - - - -	40,552	9,83,116	251,533	2 58	4 12
Rangoon and Irrawaddy Valley - - - - -	57,709	9,63,818	325,400	2 84	5 99
Northern Bengal - - - - -	67,637	11,87,288	852,900	3 06	5 69
Tirhoot - - - - -	48,713	4,29,269	193,498	4 03	11 34
Cawnpore-Farukhabad - - - - -	28,412	1,92,870	67,418	6 74	14'78
Bhavnagar-Gondal - - - - -	71,699	5,87,694	170,494	6 73	12 20
TOTAL of Narrow Gauge Railways -	8,30,538	1,38,87,411	4,566,922	2 90	6 20

* This line is now worked by the East Indian Railway Company

[Issue IV—No 11 F]

ABSTRACT OF STATISTICS OF WORKING INDIAN RAILWAYS

COST OF WORKING (GENERAL CHARGES)

GENERAL ABSTRACT

[From Statistics compiled in accordance with Public Works Department Circular, No 7 Railway, dated 17th February 1881]

RAILWAYS	General Charges.	Gross Earnings	Total Train Mileage	Per Total Grain Mile	Per Cent on Total Earnings
ALL BROAD GAUGE RAILWAYS.	<i>Rs.</i>	<i>Rs</i>	<i>Miles</i>	<i>As</i>	<i>Per Cent</i>
First half of 1881 - - - - -	29,24,724	6,54,76,188	14,878,209	3 25	4 47
Second half of 1881 - - - - -	29,40,168	5,91,28,467	18,608,681	3 45	4 97
First half of 1882 - - - - -	29,57,798	7,14,38,882	15,462,071	3 06	4 14
Second half of 1882 - - - - -	29,22,419	5,88,10,549	18,558,008	3 42	5 01
First half of 1883 - - - - -	29,52,788	7,64,80,895	16,811,317	2 81	3 86
TOTAL - - - - -	1,46,97,892	33,08,29,976	79,908,286	3 18	4 44
BROAD GAUGE RAILWAYS, EXCLUDING EAST INDIAN RAILWAY					
First half of 1881 - - - - -	20,65,809	4,26,68,929	10,281,715	3 21	4 84
Second half of 1881 - - - - -	20,72,575	3,65,24,249	9,364,590	3 54	5 67
First half of 1882 - - - - -	21,11,005	4,62,27,655	10,990,092	3 07	4 56
Second half of 1882 - - - - -	20,67,878	3,68,99,182	9,067,981	3 85	5 68
First half of 1883 - - - - -	20,96,881	5,08,09,638	11,307,428	2 90	4 18
TOTAL - - - - -	1,03,82,948	21,21,29,648	51,101,806	3 25	4 89
NARROW GAUGE RAILWAYS					
First half of 1881 - - - - -	7,18,168	94,07,118	3,268,898	3 49	7 58
Second half of 1881 - - - - -	7,11,541	87,80,659	3,192,490	3 56	8 01
First half of 1882 - - - - -	7,57,517	1 17,86,746	3,890,680	3 11	6 42
Second half of 1882 - - - - -	8,06,480	94,21,643	3,344,708	3 86	8 56
First half of 1883 - - - - -	8,30,688	1,38,87,411	4,586,922	2 90	6 20
TOTAL - - - - -	38,19,189	5,27,63,977	18,283,138	3 34	7 21

R. A. Sargeant, Major, R. E.,
 Officiating Under Secretary to the Government of India,
 Public Works Department, Railway Branch

Calcutta, 19 March 1884.

Appendix, No. 24

PAPER handed in by Major L Conway-Gordon, R E , and referred to in his Evidence of 16th May 1884—Question 4396

FINANCIAL RESULTS OF THE TRANSACTIONS CONNECTED WITH THE WORKING OF THE INDIAN RAILWAYS

Y E A R.	GUARANTEED RAILWAYS.			EAST INDIAN RAILWAY.			STATE RAILWAYS.			TOTAL LOSS
	Net Traffic Receipts	Charges.	Loss	Net Traffic Receipts.	Charges	Loss.	Gross Traffic Receipts	Charges	Loss.	Columns 3, 6, and 9
	1.	2	3	4	5.	6.	7.	8.	9.	
	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs.</i>	<i>Rs.</i>	<i>Rs</i>	<i>Rs.</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>
1884 85 Budget Estimate - - -	361,30,000	451,68,880	90,38,880	485,02,460	420,26,920	-64,75,540	371,69,000	349,89,846	21,79,154	3,82,686
1883-84 Revised Estimate - - -	336,50,000	408,28,260	181,78,260	508,02,460	409,81,630	-98,20,830	208,73,000	301,20,000	7,53,000	31,04,420
1882-83 Actuals - - - - -	358,20,460	468,39,340	105,18,880	460,13,410	413,08,280	-47,05,130	264,63,270	276,08,780	11,45,510	69,59,260
1861-82 " - - - - -	361,56,260	435,12,610	73,56,360	471,05,530	364,31,060	-106,24,470	255,65,420	284,68,370	29,02,950	-3,65,160
1580-81 " - - - - -	391,33,130	438,43,210	142,15,080	425,31,170	326,68,490	-98,72,680	226,80,050	281,21,880	54,41,830	97,84,230
1879-80 " - - - - -	462,25,840	637,68,900	175,43,060	117,78,920	26,98,790	-90,78,130	154,87,280	226,39,310	71,52,030	166,16,060
1878-79 " - - - - -	520,13,060	660,96,890	140 83,830	- - -	- - -	- - -	97,68,280	165,38,850	67,70,570	208,54,400
1877-78 " - - - - -	659,84,590	618,07,210	-41,27,380	- - -	- - -	- - -	58,20,770	109,17,590	50,96,820	969,440
1876-77 " - - - - -	608,76,410	577,33,160	68,56,750	- - -	- - -	- - -	38,06,680	81,67,260	43,60,580	112,17,330
1875-76 " - - - - -	425,93,200	543,54,760	117,61,560	- - -	- - -	- - -	29,28,350	60,33,300	31,06,950	148,66,310
1874-75 " - - - - -	413,15,640	548,18,850	135,03,210	- - -	- - -	- - -	13,09,860	37,05,310	23,95,450	168,98,660
1873-74 " - - - - -	361,31,140	518,89,740	157,38,600	- - -	- - -	- - -	3,99,140	22,33,400	18,36,200	175,74,860

Appendix, No 25

STATEMENT handed in by Major *L Conway Gordon*, R E, and referred to in his Evidence of 27th May 1884, Question 5363

RAILWAYS ENTERED IN SCHEDULE A.

To show more clearly the material extent of agreement between the Secretary of State and the Government of India respecting the lines entered in Schedule A., simply regarded as lines of railway more or less required for the improvement of the communications in India, apart from all questions of finance and agency, I have divided off the proposed expenditure of 28,262,450 *l.* shown in Schedule A into three Statements (*Vide* Appendices A., B., and C)

Appendix A shows the lines already specifically sanctioned by Secretary of State, Appendix B contains lines which may be said, either directly or indirectly, to have received the approval of the Secretary of State, and Appendix C shows the lines which have as yet received neither the sanction nor the approval of the Secretary of State

These Appendices show that of the total proposed expenditure of 28,262,450 *l.* the Secretary of State has already definitely sanctioned 8,141,567 *l.* He has, either directly or indirectly, approved of a further expenditure to the amount of 7,460,833 *l.*, as shown in Appendix B Of the whole expenditure, the Secretary of State may therefore be held to have considered and approved of no less than 15,602,450 *l.*, leaving only 12,660,000 *l.* for further consideration.

Even of this latter sum, 5,300,000 *l.* represents the cost of the Nagpur-Barakur line, a line which, considering the negotiations which have been carried on at home with Messrs Hoare, Miller, and Co, may be said (as a line of communication apart from all questions of agency) not to have been disapproved of. A further sum of 7,090,000 *l.* represents four lines (Nos 3, 8, 9, and 17), the projects of which are not sufficiently matured to submit to the Secretary of State for sanction, and regarding which the Secretary of State may consequently be said to have expressed no opinion at all

There is but one item alone regarding which there has been any expressed difference of opinion, and this is the alleged difference in cost, *i e.*, 270,000 *l.*, between the broad and narrow gauge construction on the Jhansi-Manikpur Railway

When considering estimates of the probable traffic on the different lines, the following data may be borne in mind.

In any line which is worked so that the revenue expenses do not exceed 60 per cent. of the gross receipts—

<i>Rs</i> 58	per mile	per week	will pay	four per cent	on a capital	outlay of	<i>Rs</i> 30,000	per mile
<i>Rs</i> 68	"	"	"	"	"	"	<i>Rs</i> 35,000	"
<i>Rs</i> 77	"	"	"	"	"	"	<i>Rs</i> 40,000	"
<i>Rs</i> 90	"	"	"	"	"	"	<i>Rs</i> 50,000	"
<i>Rs</i> 115	"	"	"	"	"	"	<i>Rs</i> 60,000	"
<i>Rs</i> 135	"	"	"	"	"	"	<i>Rs</i> 70,000	"
<i>Rs</i> 154	"	"	"	"	"	"	<i>Rs</i> 80,000	"
<i>Rs</i> 173	"	"	"	"	"	"	<i>Rs</i> 90,000	"

The following official opinions also bear on the consideration of the probable earnings of an Indian railway, judged from statistics of the traffic existing previous to the construction of the line —

Para. 25 "The only reason I could ever discover for the extraordinary delusion regarding the present prospects of local traffic on this line,* is the circumstance that on a perfectly open, unenclosed, flat, alluvial, roadless country the traffic and population is never visibly concentrated in a manner to strike the attention of the superficial observer. When a man can walk, as he can in Bhawalpoor or Sindh, direct as the crow flies from his own house to any point 5, 10, 20, or even 50 miles distant, untempted by any made road, unimpeded by hedgerow or hillock, ravine, or mountain ranges, or anything but an irrigation canal or thicket of jungle trees, the ordinary traveller may be excused for under-estimating the population, productiveness, or commerce, as compared with most parts of India, where the natural features of the country force traffic and populations to concentrate themselves on particular lines and spots"

"It must be remembered that by far the greater portion of the traffic carried by Indian railways is of their own creation."

"It may be admitted that, circumstances having long barred intercourse . . . , we should look rather to the development of traffic by the railway, than to providing for an existing traffic."

His Excellency Sir Bartle Frere Minute dated 3rd August 1866.

* The Indus Valley Railway

Government of India, Despatch to Secretary of State, No. 180, Railway, dated 18th August 1883.

Sir G Campbell, Chief Commissioner of the Central Provinces, Minute dated 28th March 1868.

No 1.

REWARI-FEROZPUR, WITH BRANCH TO FAZILKA.

Length.—302 miles.

Gauge.—Metre

Cost—Inclusive of rolling stock, Rs 1,41,34,035

Cost per Mile.—Rs 36,801.

Direction of Line—²¹The direction taken by the line is from Rewari, on the Rájputáns State Railway, to Bhawáni and Hissar, thence to Sursa, from there it goes via Bhatinda to Faridkot, to which place it was deflected in deference to the earnest wish of the Rája, and then on to Ferozepore, with a branch line leading from the Kot Kapúra station to Fazilka. It passes through the districts of Gurgaon, Hissar, and Sursa, through territories belonging to the Native States of Patála, Sind, Nábha, and Faridkot, and terminates in the Ferozepore district."

²² Secretary of State, Despatch No. 92, Railway, dated 19th July, 1883

"The country traversed by the railway is generally flat and presents few obstacles; the chief heavy works are a 16 span bridge with 20 feet girders at the 13th mile from Rewari, the bridge over the Ghaggar river beyond Hissar, which will require 13 spans of 40 feet girders, and two smaller bridges over the Bhatinda and Abohar branches of the Sirhind Canal"

Précis of Correspondence

October 1880—The Government of India orders the Director General of Railways to make a railway reconnaissance of the country between Delhi and Ferozepur, and also between Rewari and Hansi

Government of India, Letter No 807, R.E., dated 22nd October 1880

March 1881—The Director General of Railways submits preliminary report on the railway between Delhi or Rewari and Ferozepur.

Director General of Railways, Letters Nos. 0574 and 061, C, dated 2nd and 8th March 1881

March 1881—Government of India orders the line from Rewari to Hissar to be permanently located.

Government of India, Letter No 167, R C, dated 10th March 1881.

April

Punjab Government, Letter No 2106, dated 9th April 1881

Government of India, Despatch No 47, Railway, dated 14th May 1881.

Secretary of State, Despatch No. 29, P W., dated 20th June 1881

Director General of Railways, Letter No 300, C, dated 25th August 1881.

Government of India; Despatch No 110, Railway, dated 24th September 1881

Government of India, Letter No. 754, R.C., dated 26th September 1881

Secretary of State, Despatch No 151, Railway, dated 10th November 1881

Government of India, Despatch No 17, Railway, dated 20th February 1882

Punjab Government, Letter No. 61, C, dated 22nd May 1882

Government of India; Despatch No 81, Railway, dated 24th June 1882

Government of India, Letter No 622, C., dated 17th July 1882

Secretary of State, Despatch No 121, R., dated 7th September 1882.

Telegram from Viceroy, dated 6th October, 1882

Telegram from Secretary of State, dated 18th October 1882

Secretary of State, Despatch No 149, R., dated 30th November 1882

Government of India Despatch No. 79, Railway, dated 2nd June 1883.

Secretary of State, Despatch No 92, Railway dated 18th July 1883.

April 1881—Punjab Government approves of the line starting from Rewári instead of Delhi, in order to avoid the heavy works required to cross the Saubi torrent and other drainage canals that terminate in the Najafgarh Jhil, as also to accommodate the important town of Bhawáni

May 1881.—Government of India applies for the sanction of Secretary of State to the construction of the section from Rewári to Hissar, as a protective line, the tract of country traversed being particularly liable to drought, with a rainfall of only about 12 inches per annum. 84 miles, 37 lacs, at about 42,700 rupees per mile, gauge metre, in order to utilize the spare material from the Kandahar line.

June 1881—Secretary of State sanctions estimate of the Rewári-Hissar section, and approves of the work being put in hand.

August 1881—Director General of Railways submits final plans and estimates of the section from Rewári to Hissar.

September 1881—The Government of India submits final estimates for Rewári Hissar section to the Secretary of State for approval, 88½ miles, 40 lacs of rupees, the additional length being due to a detour made to accommodate the large town of Hansi.

September 1881—Construction of line from Rewári to Hissar ordered.

November 1881—The Secretary of State sanctions the final estimate for Rewári-Hissar section, commenting on the two items for "establishment" and "fencing"

February 1882.—The Government of India reply to Secretary of State's comments on the two items of the estimate referred to above

May 1882—The Punjab Government recommends that the Hissar-Ferozpur section be taken *viâ* Faridkot, and not *viâ* Muktsar, as proposed

June 1882—The Government of India submits, for sanction of Secretary of State, the estimate for Hissar-Ferozpur section, with branch to Fazilka, 203 miles, 85,72,032 rupees.

July 1882—The Government of India, after some correspondence, adopts route *viâ* Faridkot, as recommended by the Punjab Government

September 1882—The Secretary of State refuses sanction to Hissar-Ferozpur section, on the ground that the districts traversed by the line cannot be regarded as needing means of protection against famine more than other parts of India subject to serious drought.

October 1882—The Government of India telegraph that they consider the Hissar Ferozpur line as of the first importance

October 1882—The Secretary of State sanctions Hissar Ferozpur section by telegraph.

November 1882—The Secretary of State explains that sanction to the line was given in deference to the Viceroy's urgent request, but that he does not consider that this railway, passing through a tract only scantily populated and partially cultivated, will afford protection against famine on a scale commensurate with the outlay

June 1883—Government of India submit for sanction revised and complete estimates for Rewári-Ferozpur line, amounting, inclusive of rolling stock, to 1,41,34,035 rupees

July 1883.—The Secretary of State sanctions the above estimate

Population of Country

	POPULATION OF COUNTRY		
	Area in Square Miles	Population	Population per Square Mile.
English Territory			
Division of Delhi - - -	5,609	1,916,423	342
" Hissar - - -	8,476	1,237,435	145
" Lahore - - -	8,061	1,889,495	217
Native States			
Pattala - - - - -	5,412	1,586,000	292
Fardkot - - - - -	600	68,000	113
Nabha - - - - -	868	228,155	262
Jheond, - - - - -	1,236	311,000	252

Population of Towns.

Rewári - - - - -	24,503
Bhowáni - - - - -	32,254
Hansi - - - - -	13,563
Hissar - - - - -	14,133
Dadri - - - - -	12,000
Sírsa - - - - -	11,000
Ferozpur - - - - -	36,429
Fazilka - - - - -	3,406

Advantages of Line, Probable Traffic, &c

"The Rewári-Ferozepore Railway, when complete, will form the complement of the Sirhind Canal as regards that portion of the country which will be watered by the canal, while in the unirrigated arid tracts along the south-eastern border of the Province it will constitute an important insurance against famine in rainless years, and be a means of exporting the surplus produce in years of prosperity"

Administrative Report of the Punjab for the year 1882-83, page 201

Manufactures, &c, of the Hissar Division

"The annual outturn of rough saltpetre is estimated at 450 maunds. The rural manufactures are coarse cotton cloth, vessels made of prepared skins chiefly at Fatehabad; copper and brass vessels. Principal exports oilseeds, chiefly sesamum, the trade in which is increasing, in good seasons grain and considerable quantities of the coarser grains go westward, copper and brass utensils to Rajputana, hides are sold for Cawnpore and Meerut, a little cotton and Fazilka to Karachi. Imports salt, sugar, fine rice, cotton goods of English make, spices, and iron. The exports are about double the imports in value. The trade of the district centres in Bhuwáni, where nine lines of traffic converge, but since the opening of the Rajputana Railway several traders have removed to Delhi."

"Gazetteer of India," Vol IV, page 75

Ferozepore District, Commerce and Trade, &c.

"The staple export of the district consists of grain, for which the market of Ferozepore forms the local centre. The enterprising ját cultivators of the interior carry on trade upon their own account, conveying their produce on camels or in carts, not only to Ferozepore itself, but also to Amritsar, and even to Lahore. In the Sutley belt, the village

"Gazetteer of India," Vol. III., page 269

village bania acts as merchant and banker Ferozapore does a considerable trade with all the towns between the Jumna and the Beas, while large consignments of wheat and cotton, collected from the district and the neighbouring Native States, are shipped down the Sutlej for Sukkur and Karáchi. The exports to towns beyond the Punjab alone reached a value of 54,056 l in 1871-72. An important cattle fair takes place annually in the month of January at Muktsar, on the occasion of a great Sikh festival. The local manufactures are of the humblest description, being entirely confined to the supply of the neighbouring country."

The trade statistics of the towns of Bhawání and Ferozpur will be found in detail in the Appendices to Letter from Superintending Engineer, Delhi-Ferozpur Railway Survey, No 38, dated 27th January 1881.

Report by Deputy Commissioner of Hisar, dated 18th December 1880.

The imports into Bhawání for 1879-80 were 2,107,531 maunds, the chief articles being —

	<i>Maunds</i>
Cotton, raw - - - - -	11,147
" twist - - - - -	3,305
" piece goods - - - - -	14,687
Fruits - - - - -	10,084
Wheat - - - - -	43,890
Gram and pulses - - - - -	466,280
Other spring crops - - - - -	142,900
Rice - - - - -	152,592
Other autumn crops - - - - -	31,274
Ghi - - - - -	7,115
Iron - - - - -	9,816
Salt - - - - -	83,670
Saltpetre - - - - -	16,000
Mustard and rape-seed - - - - -	25,727
Till seed - - - - -	14,320
Sugar, refined - - - - -	82,120
" unrefined - - - - -	309,812
Firewood - - - - -	229,606
Bamboo - - - - -	212,000
Timber - - - - -	22,300

The exports from Bhowání the same year, 1879-80, were 904,368 maunds, including —

	<i>Maunds</i>
Gram and pulses - - - - -	75,507
Rice - - - - -	122,215
Cotton piece-goods - - - - -	11,940
Salt - - - - -	83,670
Sugar, refined - - - - -	65,050
" unrefined - - - - -	297,825
Bamboos - - - - -	76,000

Report by Deputy Commissioner of Sirsa, dated 21st January 1881

Some of the principal imports of Sirsa during the year 1879-80 are given as follows —

	<i>Maunds.</i>
Sugar - - - - -	195,000
Rice - - - - -	25,000
Wheat - - - - -	75,000
Cotton piece-goods - - - - -	20,000
Iron - - - - -	12,000
Stones, &c - - - - -	110,000
Cotton, raw - - - - -	25,000
Bamboos and timber - - - - -	50,000
Salt - - - - -	35,000

5 r 3

And

And the principal exports of Sirsa —	Maunds.
Sugr - - - - -	105,000
Mustard-seed - - - - -	49,000
Oilseeds - - - - -	50,000
Til-seeds - - - - -	51,000
Bajra - - - - -	75,000
Gram and barley - - - - -	250,000
Wheat - - - - -	40,000
Oil-cake - - - - -	25,000
Wool - - - - -	52,000
Alum - - - - -	20,000
Saltpetre - - - - -	30,000
Salt - - - - -	25,000
Hides - - - - -	25,000

The following were the principal imports and exports of Ferozpur city during the year 1879-80:—

Report by Deputy Commissioner, dated 24th December 1880

	Imports	Maunds
Grain - - - - -	- - - - -	567,772
Sugar - - - - -	- - - - -	34,196
Ghi - - - - -	- - - - -	2,980
Fuel - - - - -	- - - - -	13,882
Building materials - - - - -	- - - - -	64,054
Tobacco - - - - -	- - - - -	1,812
Metals - - - - -	- - - - -	50,494
Cotton - - - - -	- - - - -	5,973
Wool - - - - -	- - - - -	5,242
Salt - - - - -	- - - - -	31,583
<i>Exports.</i>		
Grain - - - - -	- - - - -	207,568
Sugar - - - - -	- - - - -	17,493
Building materials - - - - -	- - - - -	60,271
Metals - - - - -	- - - - -	34,001
Wool - - - - -	- - - - -	3,948
Salt - - - - -	- - - - -	27,279

“The import trade between Hissar and Delhi, consisting chiefly of cotton piece-goods, gur, shakar, khand, rice, timber, iron, indigo, tobacco, grain, ghi, and drugs, may approximately be estimated at 735,000 maunds per annum. The export trade, made up of wheat, bajra, gram, saltpetre, salt, ghee, gur, shakar, cotton, hides, indigo, seed, and munj, would probably exceed 800,000 maunds per annum.”

Deputy Commissioner of Rohtuk, Letter No. 51, dated 13th February 1882.

“The approximate export trade of the Sirsa district, consisting chiefly of wheat and other grains, rice, sugar, ghee, cotton piece-goods, salt, oil and oilseeds, cotton, alum, and leather, may be taken as 1,252,650 maunds, and the import trade, consisting of wheat, rice, and other grains, sugar, ghee, oil and oilseeds, salt, timber, lime, stones, &c., amounts to about 1,498,000 maunds.”

Deputy Commissioner Sirsa, Letter No 36, dated 15th February 1882

“The following table shows the total probable railway trade of the district of Hissar in maunds —

Deputy Commissioner of Hissar, Letter No 47, dated 2nd March 1882

T O W N	Imports.	Exports	TOTAL.
Bhowani - - - - -	789,700	520,000	1,310,500
Hansi - - - - -	185,000	260,700	445,700
Hissar - - - - -	117,500	46,900	164,300
Fatehabad - - - - -	11,480	13,200	24,680
TOTAL - - - - -	1,103,680	841,800	1,945,180

“Judging

Punjab Government, Letter No. 3895,
dated 28th April 1882

"Judging from the reports made, the prospect of a paying traffic on the proposed line (from Rewari to Ferozpur) are very encouraging"

The first section of the line from Rewari to Hissar was opened in August 1882, and a second section from Hissar to Sirsa was opened on the 1st January 1884.

The receipts on the opened section of this purely protective railway have been from 83 rupees to 100 rupees per mile per week at the dull season of the year, equivalent, with working expenses at 58 per cent. of the gross receipts, to about 4 7 per cent on the capital expended*

* This is the percentage of working expenses on the Rajputana Railway

No. 2.

JHANSI-MANIKPUR.

Length.—180 miles.

Gauge.—Broad

Cost—Rs 1,70,00,000

Cost per Mile.—Rs 94,400

Direction of Line—The line starts from Manikpur, a station of the Jubbulpur Branch of the broad gauge East Indian Railway, *via* Mau, Jaitpur, Mohoba, Banda, and Kurwi to Jhansi, where it will form a junction with the proposed broad gauge line from Bhopal to Gwalior.

Précis of Correspondence.

Government of India, Letter No 81,
Railway, dated 24th June 1882

June 1882.—The Government of India requests sanction to the construction of a metre gauge line from Jhansi to Burgurh, for the protection against famine of the Bundelkund districts 203 miles, 1,30,00,000 rupees.

Secretary of State, Letter No 121, R,
dated 7th September 1882

September 1882.—In reply, the Secretary of State remarked that the information furnished as to the grounds on which the location of the line had been determined was insufficient, and that the recent provisional acceptance of proposals by the Great Indian Peninsula Railway to undertake a broad gauge line from Bhopal to Jhansi and Gwalior had an important bearing on the subject of this railway

Government of India, Letter No. 663,
R C, dated 25th July 1883.

July 1883.—The Government of India informs the Government of the North West Provinces that a broad gauge line from Jhansi to Manikpur will cost 1,62,75,600 rupees, and asks if the North West Provinces will contribute 50 lacs towards construction of line.

Government, North West Provinces, Telegram, dated 14th August 1883

August 1883.—The Government, North West Provinces, assents to contribute 50 lacs on terms stated.

Government of India, Letter No 130,
Railway, dated 18th August 1883.

August 1883.—The Government of India apply to the Secretary of State for sanction for a broad gauge line from Jhansi to Manikpur; 180 miles, 1,70,00,000 rupees, or, 94,444 rupees per mile.

Secretary of State, Telegram, dated 23rd
August 1883

August 1883.—Secretary of State sanctions construction of line, the gauge not being mentioned in the telegram.

Government of India, Telegram, dated
26th August 1883

August 1883.—The Government of India telegraphs that the Local Government concurs with them in recommending that the line be constructed on the broad gauge.

Government of India, Letter No. 708,
R C, dated 31st August 1883

August 1883.—The Government of India commences construction of line on the broad gauge, and orders land to be taken up for that gauge

Secretary of State, Telegram, dated 8th
November 1883

November 1883.—The Secretary of State orders the line to be constructed on the metre gauge

Also, Despatch No 140 R., dated 8th
November 1883.

0.61

December 1883—The Bombay Chamber of Commerce protest against the line being made on the metre gauge.

Bombay Chamber of Commerce, Letter, dated 8th December 1883

December 1883—The Bombay Government expresses its opinion strongly also in favour of the broad gauge

Bombay Government, Letter No. 24, dated 31st December 1883

January 1884—The Government of the North West Provinces protests against the construction of the line on the metre gauge, and requests that, if this decision be adhered to, their promise to contribute 50 lacs towards the cost of the line may be considered annulled, the terms on which that promise was made having been departed from.

Government of North West Provinces, Letter No 59, Railway, dated 8th January 1884.

January 1884—The Government of India protests against the line being made on the metre gauge.

Government of India; Despatch No 16, Railway, dated 29th January 1884

March 1884—The Secretary of State adheres to his decision regarding the gauge.

Secretary of State, Telegram

April 1884—The Government of India again protests against this decision, stating that, as the large contribution from the Government of the North West Provinces, promised on the distinct understanding that the line should be on the broad gauge, had been withdrawn, there were now no funds to proceed with the line on the metre gauge.

Government of India; Despatch No 46, Railway, dated 14th April 1884.

Population of Districts.

	Area	Population	Population per Square Mile.
Banda - - - - -	2,908	697,684	240
Jhansi - - - - -	1,567	317,826	203
Hamirpur - - - - -	2,287	529,137	231

(Figures from the "Gazetteer of L.D.A.")

Population of Towns

Manikpur - - - - -	6,045
Jaitpur - - - - -	5,159
Banda - - - - -	27,573
Jhansi - - - - -	30,000

Advantages of Line, Probable Traffic, &c.

The object of the line is the protection from famine of the Bundelkund districts.

Government of India, Despatch No 81, Railway, dated 24th June 1882.

Para. 2. "The total cultivated area of the several districts transversed by, or adjoining, the proposed railway, may be thus classified—

Memorandum from Government of India, No 122/21/27 (Statistics), dated 23rd July 1883.

	Kharif.		Rabi		TOTAL.	
	Food.	Non-Food	Food.	Non-Food.	Food.	Non-Food
	<i>Acres.</i>	<i>Acres.</i>	<i>Acres</i>	<i>Acres</i>	<i>Acres.</i>	<i>Acres.</i>
Hamirpur -	282,000	174,000	288,000	23,000	570,000	197,000
Banda - -	345,000	194,000	390,000	10,000	735,000	204,000
Jhansi - -	180,000	63,000	178,500	4,000	347,500	67,000
Jalau - -	153,500	79,000	295,000	9,000	448,500	88,000
TOTAL - -	949,500	510,000	1,151,500	46,000	2,101,000	656,000

Statistics

Statistics are not available for the southern portion of the Allahabad district "

Para. 3 "The chief non-food crops are cotton and oil-seeds, of food crops, the millets known as bajra and juar are extensively grown in the rains, wheat and gram mixed, barley and gram, and gram are the chief *rabi* staples. Irrigation is almost unknown, and the cultivation, as a rule, of a low careless order. The soil varies greatly in fertility, and much of it is poor, but the best kinds of *mar*, or cotton soil, are extremely productive "

Para. 4 "The districts which the railway would open up are, however, known to be thinly peopled, and to comprise considerable areas of waste land, most of which could be brought under cultivation as the population increases. In ordinary years the agricultural produce of the tract is considerably in excess of its requirements. The rainfall, however, is precarious, and years of drought are not uncommon, when food has to be imported by carts and pack bullocks from the Gangetic Doab or from the Central Provinces. A railway would give much stability to agricultural operations, but, though capable of considerable development, the tract is never likely to be either as thickly populated or as highly cultivated as the districts north of the Jumna. The rainfall, as already said, is scanty, water, as a rule, lies too far below the surface to admit of well irrigation, and the physical features of the country would prevent the construction of large canals. It is also doubtful whether it would pay to irrigate the black cotton or *mar* soil which predominates, and which in ordinary years bears excellent crops without artificial watering "

Government of India to Secretary of State ;
No. 130, Railway, dated August 1883

Para. 6. "The amount of traffic which this line will attract is a quantity not capable of any approximate arithmetical calculation. The Engineer in Chief submitted on 25th August last an elaborate report, from whence we append certain extracts. From these it is apparent that the traffic in both passengers and goods, flowing east and west, is considerable, but that is far surpassed by that which flows north and south, passing mostly through the great trade centres of Mau-Ranipur and Mahoba."

Para 8 . . . "It is on record that the districts of Banda, Hamirpur, and Jhansi suffered severely in 1813-14, in 1819, and in 1833-34, but little detailed information is available "

"The drought in 1837-38, which, undoubtedly, produced the most grievous famine experienced in Upper India since the commencement of British rule, had its centre region of extremest scarcity in the region between Agra and Cawnpore and extended to all the surrounding parts of the North Western Provinces and the Native States to the south of Agra. . . . The whole Doab, from Cawnpore to Hathras inclusive, and the trans-Jumna districts of Banda, Hamirpur, Kalpi, . . . felt its full force. . . . No mention is made of Jhansi or Lalitpur in the reports, but it is hardly likely that they can have altogether escaped."

"The effect of this famine is shown in the map facing page 10 of the Famine Commission Report, Part I, as "severe" from Jhansi to Mau-Ranipur, and "intense" from there to the eastern borders of Banda."

During the famine of 1868 and 1869, again, "the part which suffered most was the trans-Jumna tract, which includes a portion of Muttra, Agra, and Allahabad, the whole of Banda, Hamirpur, Jalaon, Jhansi, and Lalitpur. "In the two latter districts the famine was severe" "On this occasion the position of 1837-38 was inverted, the western portion of the tract under consideration suffering "intensely," and the eastern only "severely" (see map facing page 13 of Famine Commission Report, Part I). The year 1868 was one of the worst years these districts ever experienced. According to elaborate calculations made by Mr C. A. Elliot, Jhansi lost three-quarters of kharif and half of *rabi*, Banda and Hamirpur half-kharif and one

third rabi, representing a loss in the districts of 7½ millions of maunds out of a total yield of 16 millions. Valued at the famine price of 10 seers per rupee, this loss amounts to 3,00,00,000 rupees, or, even at the ordinary price of 30 seers, to about 1,00,00,000, which is more than half the cost of the proposed railway. In July 1869 the stock of food in Jhansi city fell so low that the local authorities were obliged to import grain from Cawnpore at the public expense.

Banda, Hamirpur, and Jhansi again suffered "severely" in 1873-74. "The agricultural population of this tract had been struggling with a succession of bad years, which had impoverished landlord and tenant, . . . ; thus, the bad autumn harvest of 1873 found the people at the end "of their resources."

Finally, for the fourth time in 50 years, this unfortunate area was subjected to "severe" famine in 1877-78. In Banda and in three-fourths of Hamirpur the kharif crop "was almost a total failure."

Para 9 "The precarious conditions and the claims of Bundalkhand were thus urged by the Famine Commission.—

"South of the Jumna lies the province of Bundalkhand. With a scanty and irregular rainfall, with subsoil water generally lying at a great depth, this province suffers excessively on any failure of the monsoon. From its geographical position, too, it is difficult of access, and it has been hitherto impracticable to afford it relief from without, and at the approach of drought people are much in the habit of emigrating for the time to more favoured quarters.

There is no reason to hope that there will not be a recurrence of famine again in Bundelkhand before many years are past. The people of this province have contributed their share of the public revenues which were applied to make their countrymen secure in the Gangetic Doab, and it is surely not too much to ask that they in turn may receive what protection can be afforded them, from the same source"—(Famine Commission Report, Part II., pages 156-57.)

"The Famine Commission recommended that the construction of this line should be undertaken as soon as practicable as a famine work. The soil, however, in favourable seasons, yields luxuriant crops of cotton and cereals, and a large and remunerative local traffic may, therefore, be expected."

Bombay Chamber of Commerce to Bombay Government, No 198, dated 8th December 1883.

Para 7. "On the whole, while we readily admit that the traffic is not likely to exceed what a metre gauge line would suffice to carry, we think we are justified in anticipating, as we have already said, that, as a broad gauge line, 'the undertaking may prove fairly remunerative at no very distant date,' and that it will certainly be no considerable burden on the finances."

Government of India; Despatch No. 17, Railway, dated 28th January 1884

No. 3.

VIZAGAPATAM-RAIPUR.

Length.—350 miles.

Gauge.—Metre

Cost—Rs. 2,90,00,000.

Cost per mile.—Rs 82,850.

Direction of line.—From Vizagapatam, Waltas, and Bilapatam, the line is to run east of the Noagurh Hills, passing near Parvatipur, Biesemkuttak, Ombadola, Asurgor, Karnal, Nars, and Arang.

Précis of Correspondence

Government of Madras, Letter No 150, R., dated 15th February 1881

February 1881.—The Government of Madras proposes line from Raipur to the coast, and requests the Government of India to sanction the cost of the survey of the line, some 300 miles in length

Government of India, Letter No 619, R C, dated 18th August 1881

August 1881.—The Government of India approves of a reconnaissance of the line being made between Vizagapatam and Raipur, the route proposed being through Jeypré and Omerkot

Government of Madras, Resolution No 2294, W, dated 16th September 1881.

September 1881.—The Madras Government orders the survey to be undertaken.

Government of Madras, Letter No 2307, dated 13th September 1882.

September 1882.—The Madras Government submits preliminary report of reconnaissance, with note by consulting engineer, recommending route east of the Noagurh Hills, passing near Párvatipur, Bissemkuttah, Ombadola, Assuigor, Karial, Nara, and Arang.

Government of India, Letter No 943, R C, dated 7th October 1882

October 1882.—The Government of India approves of eastern route, and requests that the location survey of the line may be undertaken at once.

Government of India, Letters, Nos 964 and 965, R C, dated 2nd November 1882

November 1882.—The Government of India requests the Madras Government and the Chief Commissioners of the Central Provinces to furnish estimates of the probable traffic, description of the resources of the districts traversed, and information as to the probable famine protective influence of the line.

Government of India, Letter No. 334, R C, dated 21st April 1883

April 1883.—The Government of India ask for an estimate of the line on the standard 5 feet 6 inches gauge, as well as to the metre gauge.

Madras Government, Resolution No 913, R A, dated 25th August 1883

August 1883.—The Madras Government forward detailed estimates of the line of Vizagapatam to Parvatipur, 86 miles Broad gauge, 73,96,207 rupees, or 86,003 rupees per mile. Narrow gauge, 60,66,244 rupees, being at the rate of 70,538 rupees per mile. Both estimates, exclusive of rolling stock. Also approximate estimates of remainder of line from Parvatipur to Raipur Broad gauge, 2,26,67,626 rupees, or 99,074 rupees per mile, and metre gauge, 1,79,82,596 rupees, being at the rate of 73,294 rupees per mile, both exclusive of rolling stock.

Madras Government, Letter No 976, R A, dated 11th September 1883

September 1883.—The Government of Madras furnish information regarding probable traffic, &c, &c.

Government of India, Letter No 928, R C, dated 16th October 1883

October 1883.—The Government of India state that the information regarding the line is not sufficiently complete to allow of the estimate of the line being sent to Secretary of State, and request the Madras Government to continue the preparation of the detailed surveys.

Population of Country.

	Area	Population	Population per Square Mile.
Raipur - - - - -	11,885	1,093,405	92
Karond or Kalkhandl - - -	3,745	133,483	35
Vizagapatam - - - - -	18,344	2,610,830	142

Population of Towns

Raipur - - - - -	19,116
Parvatipur - - - - -	8,565
Bimlipatam - - - - -	8,744
Waltair - - - - -	1,483
Vizagapatam - - - - -	32,191

Advantages of Line, Probable Traffic, &c."Imports from the Coast Districts (*via* Kalahandi)

Minute by J H Morris, Chief Commissioner, Central Provinces, dated 7th April 1883.

	Salt	Tobacco	Miscellaneous	TOTAL
	<i>Maunds</i>	<i>Maunds</i>	<i>Maunds</i>	<i>Maunds</i>
To Sambalpur -	16,000	500	2,800	19,300
„ Raipur -	23,000	2,000	500	25,500
„ Bilaspur -	2,000	1,900	-	3,900
TOTAL -	41,000	3,500	3,300	47,800

Exports to the Coast Districts (*via* Kalahandi.)

	Grain	Pulse	Seeds	Cotton	Sugar	Miscellaneous	TOTAL
	<i>Maunds</i>	<i>Maunds</i>	<i>Maunds</i>	<i>Maunds</i>	<i>Maunds</i>	<i>Maunds</i>	<i>Maunds</i>
From Sambalpur	4,100	320	6,400	2,000	4,000	1,450	18,070
„ Raipur -	22,500	11,900	8,600	2,800	-	4,090	49,890
„ Bilaspur -	7,000	11,050	1,400	4,000	-	-	21,450
TOTAL -	33,600	22,170	16,400	8,800	4,000	6,440	88,610

Para 5. "To recapitulate —The existing traffic between Chhatisgarh and the Bay of Bengal littoral consists in the exchange of salt, tobacco, and manufactured goods for grain, pulse, oil-seeds, forest produce, and sugar. It runs by two routes, by the Mahanadi and by road *via* Kalahandi. By the latter route it is believed that there is an annual traffic in both directions of between 3,00,000 and 4,00,000 maunds, of which about one-third lies with the British districts of Sambalpur, Raipur, and Bilaspur, and the remainder with the Native State of Kalahandi and native territory adjoining it. The line followed by this traffic is almost exactly that proposed for the railway (if the eastern route be adopted), and the whole of this traffic would therefore in time be certainly absorbed by the railway. The amount of the traffic transacted by the Mahanadi is unknown, but is probably not much less than that transacted by road *via* Kalahandi. In so far as the goods now brought up the Mahanadi from Cuttack can be supplied from Vizagapatam, the railway may be also credited with the absorption of this stream of traffic."

Para 6. "Turning now from the traffic as it is at present to the traffic which may be expected on the opening of railway communication, the fact to be first noted is that between the south-eastern corner of the Raipur district and the border of the Madras Presidency, the line will traverse a country of considerable fertility, but of very low present productiveness. The thickly populated and highly cultivated portions of Chhatisgarh are almost exclusively confined to the districts of Raipur, Bilaspur, and Sambalpur. Kalahandi is one of the most productive of the feudatory States which border on these districts, but compares very unfavourably with the adjacent British territory. The population of Raipur is 118, of Bilaspur 130, and of Sambalpur 153 to the square mile, whereas the population of Kalahandi is returned as being only between 60 and 70 to the square mile. It is obvious, therefore, that no large immediate accession of trade can be looked for from this tract. On the other hand, it is possible that the magnificent forests with which portions of it are clothed may from the first contribute, in their timber, lac, and other produce, an important accession to the existing commerce. Mr.

Thompson

Thompson, Deputy Conservator, an officer whose opinion is of great weight, as his experience is most varied, has recently been employed in inspecting the forests of Chhattisgarh. He considers them the finest in India, with the possible exception of Assam. These magnificent forests would be opened out, not only to consumers in Southern India, but to the general timber trade of the country."

Para. 7. "The development of traffic, so far as the Raipur and Bilaspur districts are concerned, will, of course, depend on the port on which Vizagapatam ultimately assumes as a port. The distance of Raipur from Vizagapatam is only 370 miles, whereas it is 710 miles distant from Bombay, and will be between 500 and 600 miles from Calcutta, if the proposed extension of the Nagpur-Chhattisgarh line be carried out. If, therefore, Vizagapatam becomes a port through which trade may be transacted on a large scale with Europe, it may be expected to absorb the whole of Chhattisgarh traffic, and would render the projected line an extremely important one. Turning first of all to imports, it may be noted that the population of Chhattisgarh is over 4½ millions. The consumption of English manufactures, such as cotton goods and metals, is not large at present, owing to the difficulty of communication, which has long impeded the flow of traffic. In many respects the conditions of the country and the habits and customs of the people are very similar to those of Upper India. Assuming that their consumption of salt, cotton goods, and metals will be on the same scale as that of the inhabitants of the North-Western Provinces, they will annually require:—

<i>Maunds</i>
4,40,000 of salt
1,20,000 of cotton goods.
80,000 of metals.

Whether Chhattisgarh draws its supplies of cotton goods and metals by this line will depend on the future of Vizagapatam as a port. But under any circumstances, it may be expected to import the whole of its salt by this route, since Madras salt will be landed at Raipur at a much lower cost than either the salt which is now imported from Bombay by rail, or that which is brought from Upper India on pack bullocks. Indeed, with all the present disadvantages of carriage, Madras salt is at present sold in the Raipur market side by side with the Bombay article."

Para. 8 "The extent to which the *export* trade by this route may be expected to develop will also depend on the facilities which Vizagapatam will be able to offer for shipment. Should it become a rival of Bombay or Calcutta with anything like equal advantages, it may be expected in time to attract the greater part of the export traffic which Chhattisgarh now transacts with Bombay, and has been predicted to transact with Calcutta. The extent of the surplus at present available in Chhattisgarh for export may be inferred from the facts that during 1881 the exports by the Nagpur and Chhattisgarh State Railway amounted to over 10 lacs maunds, that during 1882 they increased to 24 lacs maunds, and that, notwithstanding this, there remained a traffic along the Great Eastern-road, running parallel with the railway, which amounted (taking imports and exports together) to 8 lacs maunds in the former, and 6 lacs maunds in the latter year. It may be, indeed, said that the surplus available for export is capable of almost indefinite expansion. From lack of traffic communications, the value of grain has been so low as to offer no encouragement to production; and it is a significant fact that a class which constitutes a large proportion of the population (the Satnamis) are able to indulge in the religious caprice of refusing to plough after midday—an observance which speaks volumes for the productiveness of agricultural labour under present conditions. Not only would higher prices, by offering an incentive to labour, render existing cultivation more productive, but they may be confidently expected to increase the annual surplus by the

the reclamation of large tracts of fertile and well-situated land, for the cultivation of which there would be no lack of labourers were sufficient inducement offered. But even if Vizagapatam cannot be expected to take a place amongst the principal ports of India, a considerable export of grain, pulse, and seeds may be looked for to supply current consumption in the country around it. The figures given by the Commissioner of Chhattisgarh (quoted in para 3) show that there is already some small amount of trade in these articles. The lower the cost of transport is, the more sensitive is the trade to local variations in prices. There is, as has been pointed out, a large annual surplus in Chhattisgarh, and, with the establishment of railway communication, a difference of price between Raipur and Vizagapatam, which at present would have no influence whatever upon trade, may be expected to develop a large export trade."

Para. 9. "It remains to consider the projected line in relation to famine protection. In this respect, Chhattisgarh can afford to consider the line from the exporting, and not from the importing, point of view. Periods of scarcity are not unknown in Chhattisgarh, but their occurrence has been exceptionally rare, and any necessity for importing grain has already been provided against in the establishment of railway communication with Nagpur. The capabilities of the Chhattisgarh country as an exporter of grain has already been touched upon in the preceding paragraphs. It forms a part of the tract which enjoys the largest and steadiest rainfall in the whole of India, and is in some respects the most productive portion of this tract, a large proportion of which consists of the hills and forests of the Satpuras. It may, therefore, be aptly considered as one of the reserve granaries of India, enlarging the idea which has in native mouths given it the name of 'Khalouti' or the 'land of threshing floors'. The policy of opening into it as many channels for export as possible seems, therefore, unquestionable. The value of the line for protection against famine is, however, a view of the matter to be taken from the Madras side rather than from Chhattisgarh."

Para. 10. "Turning now briefly to the political aspect of the question, it seems to me that the political importance of opening out the country through which this line would pass can hardly be over-estimated. At present that country is, as I have shown above, wild and practically closed to the influence of outside civilization. It is inhabited by uncivilized tribes, such as the Khonds; who are a source of constant anxiety, and whom it is well worth making an effort to civilise. Their recent history has shown them to be a thorn in the side of Government, a constant source of annoyance and anxiety. Repressive action has, of course, succeeded against them, but it has necessitated measures of severity which cannot but be deplored, and a disproportionate expenditure of the maintenance of law and order in this part of the country. All efforts permanently to improve the condition of the Khonds and such wild tribes here have hitherto practically failed. Progress in their permanent civilisation can scarcely be recorded. And progress will be, if not impossible, at least very slow, almost unappreciable, until this practically unknown land is opened out. There is at present little or no inducement to make roads or open up communications. But let a railway be constructed through this country, and it will be brought into contact with civilization. Feeders to the railway will be constructed, and will open up the country in all directions. The suppression of disorder will be thus rendered easy, but that is, in my opinion, a comparatively small matter. The result of this opening up of the country is far more important as affording an excellent and efficient means of speedily bringing the people under the influence of enlightenment and civilization. I regard this

this as of the highest importance, and the project under consideration has my heartiest support."

Government of Madras, Letter No 2882,
W dated 16th October 1882

Para. 7 "Any amount of the best land in Kalahundy and elsewhere is to all appearances only awaiting emigrants, and the plough to yield an enormous produce, and the cheap conveyance of salt from the coast must prove an incalculable gain to all that part of India. In famine, moreover, as has been pointed out in previous communications, the provision of a railway leading direct from the grain-producing country of Chhattisgarh to the coast cannot fail to save life and counteract the suffering on the recurrence of famine, similar to that to which the inhabitants of Vizagapatam were exposed in 1865-66."

Government of Madras; No 976, Railway,
A, dated 11th September 1883.

Para. 2 "Under the head of Administrative his Excellency the Commander in Chief remarks that, for quelling outbreaks in Kalahundi and Jeypore, the advantages of the proposed line cannot be over-estimated; that it will afford great facilities for mobilisation of troops in the disturbed parts, and in carrying out military operations in the field and in tracts at present almost inaccessible, and that it presents advantages for movement of troops from the Central Provinces to the coast preparatory to embarkation for Burmah"

"The Board of Revenue consider that the proposed railway, by opening up a hitherto isolated tract of country, would, in more ways than one, prove a powerful agent in the civilisation of the comparatively wild tribes inhabiting it, furnishing them, as it would, with an outlet for their produce, and thereby providing them with means to purchase the products of civilised industry which the railway would bring to their doors."

"The Postmaster General remarks that the economic advantages which the construction of the Vizagapatam-Raipur line will confer on the Chhattisgarh division and on the Northern Circars can hardly be over-estimated, both from the commercial and political point of view. The direct correspondence between the Central Provinces and the northern districts of the Madras Presidency, which is now non-existent, will be established, and that the European mails between Bombay and the northern districts will be accelerated by at least two days. That the saving in establishment, which will be effected directly and indirectly by the opening of the line, is estimated at about 14,000 rupees per annum; and that, having regard to the doctrine that traffic creates correspondence, and to the increased passenger traffic that may be expected, there is every reason to believe that the proposed line will become one of the important main lines of India. That, skirting as it will the difficult fastnesses of the Ganjam and Gunupur Khond tribes, it must, as times goes on, exercise a civilising effect, and that its influence in aid of administration will at once be apparent in the ease with which troops and police can be poured into the country in case of a disturbance"

Para 3 "The Board of Revenue are of opinion that, while the passenger traffic along the line northwards of Parvatipur will, for many years to come, be insignificant, the goods traffic promises to be large from the first, and increase steadily"

"The Collector of Vizagapatam remarks that the existing local traffic amounts, on a minimum, to 6,000 tons, and reaches fully 12,000 tons on roads leading to ports, that the completion of the Ponting Ghât will enlarge traffic with Jeypore; that the railways will carry this traffic to and from the foot of this ghât, that the Rayagudda traffic is certain to increase, that, when connection with Raipur is established, the traffic of the Brandara district, and perhaps of all the Nagpur division, will gravitate to the eastern seaboard, that Chhattisgarh and Nagpur will furnish an enormous supply of wheat for export at remunera-

ive prices, in exchange for salt, which the coast can supply; that the Chhattisgarh division alone will supply 120,000 tons, that silk, lac, wax, resin, timber, and hides will be available in large quantities, whilst salt, cotton goods, and metals will be demanded in return, and believes that the existing traffic at Rayagudda, between the coast and the Central Provinces, will rapidly develop from 16,000 tons, the figure of to-day, to 160,000 tons.

"The Commissioner of Salt Revenue remarks that the proposed railway will open a market to the East Coast salt in so large an additional tract of country as to change the present conditions, and to bring it into competition with Bombay salt on even terms, that there is every probability, with good feeder road opened out, that salt from Vizagapatam will go further westwards than the Raipur market, and even penetrate into the districts and feudatory States in the Chhattisgarh, Nagpur, and Jabulpore divisions of the Central Provinces, with a population of over five and a-half millions; that the total tonnage of supply may be estimated at 11,156,250 tons for one mile, and at eight pies per ton per mile, carried on an average at least 350 miles, the receipts from such a traffic would yield 4 64,843 rupees; or, allowing for working expenses at 50 per cent, would of itself be sufficient to pay a dividend of 845 per cent on the capital cost of constructing a railway 550 miles long, and costing 50,000 rupees per mile. That, with the price of salt greatly reduced, and with the population of the Central Provinces rapidly increasing (from 9,223,534 in 1875 to 11,548,511 in 1882 = 25 per cent), the demand for salt must increase also.

"The Chamber of Commerce, Cocanada, remark that for several years they have given close and earnest attention to this scheme, and have the highest possible opinion of the results which a railway from Vizagapatam through Rayagudda valley to Raipur would yield. That the proposed railway, following the line from Vizagapatam through Rayagudda Valley, will intercept at their development on the plains the three great trade routes passing through Sálúr, Rayagudda, and Gunupur; and that the immediate effect of this will be to focus at one port all the traffic which now finds outlet at Calingapatam, Bamlipatam, and Vizagapatam. That the existing trade thus focussed would of itself support a railway as far as Rayagudda, and the cheaper carriage would stimulate agriculture, and open up to producers markets now closed by reason of expensive carriage to the seaboard. That there is a large interchange of traffic between Vizagapatam and the Central Provinces; that the distance from Raipur to Vizagapatam is only half that from Raipur to Bombay, and that the effect of the railway will be to open out Raipur to the seaboard with a saving in railway carriage of rather more than 12½ rupees per ton, that Vizagapatam would compete with Bombay almost up to Nagpur itself, while from Raipur to the whole eastern half of the Central Provinces the Vizagapatam line would have absolute command of the trade. That the railway would give an impetus to wheat cultivation, resulting to the advantage of the wheat-fields of the Central Provinces in the competition with America for the wheat supply of Europe. That, in respect to salt, the railway would, to a certainty, secure to the East Coast factories the salt supply of almost the whole of the Central Provinces, and that the enormous reduction in cost to the consumer which cheap railway carriage would effect should tend materially to increase the consumption, with marked benefit to not only the salt revenue, but also to the railway revenue."

"Mr. C W Simson, of the firm of Simson Brothers, of Cocanada, remarks that the principal articles of inland trade to the coast are seeds, grain, horns, and forest produce, chiefly myrobolams. That the articles carried inwards are salt and rice, the latter not far from the coast. That, basing his calculations upon an experience of several years in connection with the trade, he estimates the existing traffic which would be received by the railway at 40,000 tons annually,

annually, an estimate likely to be exceeded by facts. That the import of manufactured salt into Central India would be developed, and the traffic in illicit salt greatly impeded by the introduction of rail conveyance. That two trial shipments to England of Brinjarry carried wheat proved that the trade would have been remunerative at the then ruling prices, had not the wheat suffered from weevils during the long land journey. Adds that, as soon as the line is opened for traffic as far as Párvatipur, it would command an income of 1½ lacs per annum, and that the telegraph also would secure a fair number of commercial messages.

Para. 4 "Under the head of Protective, the Board of Revenue remark that, from an estimate of the outturn of the harvest of the Vizagapatam District, framed in 1878 by the Collector of Vizagapatam, there would seem to be a large supply of grain annually available for export; and they go on to observe that the high political value of the railway will be shown by the facilities which it will afford for migration to the fertile but scantily peopled tracts lying between Párvatipur and Raipur from those parts of the Presidency where, owing to the rapidly increasing population, the Famine Commissioners saw reason to apprehend that the pressure of the inhabitants on the soil would sooner or later render it difficult for the people to do more than earn a precarious livelihood."

"The Chamber of Commerce, Cocanada, remark that the exports of food grains from the Vizagapatam district during the famine of 1876-77 show the enormous expansion which the producing power is capable of on encouragement, and how important a contributor of relief the district can be in times of scarcity."

Letter from the Collector of Godavari to the Secretary of the Board of Revenue, dated 17th July 1883, No 344

Para. 5. "The Chhattisgarh Division is also a wheat-producing country, but this crop is said to be grown only on the best land. In 1876, 266,000 acres were under wheat in the Raipur district. The figures for Bilaspur are not given in the 'Gazetteer of India,' and it is stated that none is grown in Sumbalpur. I put the area under wheat at 400,000 acres. In the returns of prices I have examined the extreme variations for wheat are from 19 to 76 seers a rupee. In ordinary seasons the price at Raipur appears to be from 36 to 40 seers, or about six rupees a quarter. The carriage by rail to Vizagapatam would be Rs 2 8. 0. a quarter, total Rs. 8 8 0, or, say, 15s a quarter, 12s will cover freight and other charges. With wheat at 40s in London, it would, therefore, be profitable to export it, even if sold at 20 seers a rupee in Raipur. Under these circumstances, it may be safely assumed that half the wheat crop of the province will be exported, or 200,000 quarters, taking the outturn at the low estimate of eight bushels an acre. 200,000 quarters of wheat exceed 40,000 tons in weight."

Para. 8 "My estimate of tonnage is—

	<i>Tons.</i>
Rice - - - - -	70,000
Wheat - - - - -	40,000
Seeds, &c. - - - - -	30,000
TOTAL - - -	140,000

Para. 13. "In my opinion this is the most promising railway scheme which has ever been proposed for the south of India."

Nos. 4 and 5

BELLARY-KISTNA RAILWAY

Length.—370 miles

Gauge.—Metre.

Cost—Rs 24,50,000.

Cost per Mile—Rs. 66,900.

5 X

Direction

Direction of Line.—The line starts from Hindupur, near the Mysore frontier, *via* Penukonda, Dharmavaram, Anantapur, to Guntakal, where the Madras Railway is crossed, thence *via* Nandyál, the Nandi Konama Pass, Cumbum, Vinukonda to Guntur. From Guntur the line will be carried to the Kistna river opposite Bezwada, and thence to the proposed terminus of the Nizam's State Railway (See No. 22.) :

Précis of Correspondence

June 1883 —The Madras Government submits the preliminary estimate of line from Guntur to Hindupur 374 miles; 2,45,83,529 rupees, or 67,731 rupees (or about 5,500 l) a mile

Madras Government; Letter No 648, B, dated 1st June 1883

July 1883 —The Government of India requests that the survey may be extended from Guntur to the Kistna river.

Government of India, Letter No.602, R C, dated 6th July 1883.

July 1883 —The Government of India applies for the sanction of the Secretary of State to the construction of the section from Guntakal to Guntur, 255 miles 1,77,50,000 rupees, at 69,600 rupees per mile; the section from Guntakal to the Mysore frontier being postponed for the time

Government of India, Despatch No, 114, Railway, dated 28th July 1883

September 1883 —The Secretary of State sanctions the construction of line by telegraph.

Secretary of State; Telegram, dated 26th September 1883

October 1883 —The Secretary of State, in confirming sanction previously advised by telegraph, trusts that no considerable delay will arise in carrying out the extension to Anantapur and Hindupur

Secretary of State, Despatch No 120, dated 4th October 1883

February 1884 —The Government of India concur with the Secretary of State as to the advisability of extending the Bellary-Kistna line to Hindupur, but state that as their "Protective" funds are being otherwise utilized, this line will have to be long deferred unless their recommendation that "loan" funds be made applicable to purely protective works be acceded to.

Government of India, Despatch No. 29, dated 12th February 1884.

Population of Country.

District	Area.	Population.	Proportion per Square Mile
Kistna - - - - -	8,036	1,452,376	170
Kurnal - - - - -	7,151	914,432	128
Bellary - - - - -	11,987	1,688,806	151

Population of Towns

Hindupur - - - - -	6,084
Penukonda - - - - -	5,106
Dharmavaram (táluk) - - - - -	119,877
Anantapur - - - - -	4,920
Nandyál - - - - -	9,378
Kunkonda - - - - -	12,000
Guntur - - - - -	18,033
Bezwada - - - - -	8,026

Advantages of Line, Probable Traffic, &c

Para. 7 "First and foremost, the proposed line is essentially a protective work. It will serve to create a direct and much-needed communication between the rich and productive deltas of the Godávari and Kistna, and the upland plateau known as the ceded districts, comprising the Collectorates of Kurnool, Bellary, and Anantapur. The surplus grain grown in those deltas will, by the proposed line, be brought to points whence it can be distributed throughout

Government of Madras, No 648, B, 1st June 1883

throughout the tract which suffered more than any part of this Presidency during 1877-78 "

" In this respect, the importance of the line in time of scarcity can scarcely be exaggerated. It is, without doubt, the most necessary protective work that can be named within Southern India. In order, however, that the delta produce may be more conveniently reached by the proposed line, his Excellency the Governor in Council is of opinion that its eastern terminus should be on the right bank of the Kistna, opposite Bezwáda, instead of at Guntúr "

Para. 8. " The second argument in support of the projected line is that it will serve as a direct and effectual means to distribute coal from the Singarem field among the railways in the northern provinces of this Presidency, and in Mysore. There appears now to be every reason to expect the early construction of a line of railway from the Singarem field to Bezwáda, from which point coal can with ease be conveyed by water to Madras, and the southern provinces of the Presidency. The northern provinces cannot, however, be supplied by canal, and the projected line of railway will convey the Singarem coal to large tracts of country where fuel of any kind is at present lamentably scarce, and where the working expenses of the existing railways suffer in consequence of such scarcity "

Para. 9 " With respect to the general traffic prospects of the line, owing to unavoidable causes, it is impossible to give any statistics upon which reliance can be placed. In Mr. Lambert's report will be found figures representing the traffic that exists along certain sections of the proposed route, but it must be borne in view that there is at present no through traffic of any kind, and it would tend in every way to mislead, were an opinion respecting the ultimate prospects of the undertaking to be based on a return of the petty local traffic which exists, necessarily restricted as it is by defective communications and means of transport. The tract traversed by the proposed line is by no means unfruitful. The report shows that many portions are irrigated and highly cultivated, and that it embraces several trade centres of importance. The section through the Nulla Mulla hills, which at first sight would seem to be the most unremunerative part, needs only an outlet through which to distribute its wealth of timber and fuel, which are sorely wanted in the adjacent country "

Para. 11 " It is the decided opinion of this Government that, if the projected line is to form an efficient protection against famine in the Ceded Districts, it must be carried so far south at least as the important trading centre of Hindupur. The extension thence to Bangalore will doubtless follow in due course; but, as suggested by the Government of India in the letter above quoted, it can well be postponed until Bangalore shall have been placed in railway connection with the West Coast "

Superintending Engineer, Bellary-Kistna Railway, Report, dated 17th May 1883

Para. 3 " The town of Guntúr is a rising place. The chief items of trade are cotton and indigo, which are annually exported to Europe to the extent of about 12 and 25 lacs of rupees respectively. The export of castor-oil is also considerable, but the amount could not be ascertained. There are cotton and oil presses, leather factories, &c, but it has been difficult to get at a satisfactory return of the traffic considering the importance of the place. The Bank of Madras maintains a branch at Guntúr, so that the mercantile transactions must be considerable."

Para. 16 " Much difficulty has been found everywhere along the line in getting any reliable statistics of trade, and at Cumbum only was there anything obtainable which is worth reporting. It is centrally situated, and evidently there is a large amount of traffic passing through it. During the survey droves of pack bullocks, which extended
literally
5 x 2

literally for miles, and must have numbered many thousands, were met with, besides numbers of carts, travellers, &c The following return of traffic about Cumbum has been prepared from the information collected for the year 1881-82.—

Between Ongle and Cumbum

	<i>Carts.</i>
Salt - - - - -	4,000
Iron bars - - - - -	1,000
Rice - - - - -	1,000
Green gram - - - - -	400
Red gram - - - - -	400
Wheat - - - - -	400
Bengal gram - - - - -	100
Oilseeds - - - - -	600
Cotton - - - - -	600
Miscellaneous - - - - -	1,700
	10,200

at 15 maunds = 1,53,000 maunds = 5,464 tons.

Travellers, 16,000 men.

Between Nandikanama and Cumbum.

	<i>Carts</i>
Betel nuts - - - - -	1,000
Jaggery - - - - -	200
Sugar - - - - -	200
Cloth - - - - -	400
Cocoa-nuts - - - - -	500
Opium-seeds - - - - -	800
Tamarinds - - - - -	400
Gingelly oil - - - - -	500
Grain - - - - -	1,000
Liquors - - - - -	50*
Cotton - - - - -	1,000
Indigo seed - - - - -	100
Miscellaneous - - - - -	2,000
	8,150

at 15 maunds = 1,22,250 maunds = 4,366 tons.

Travellers, 20,000 men

Between Guntur and Cumbum

	<i>Carts.</i>
Timber - - - - -	2,400
Tobacco - - - - -	4,800
Chulhes - - - - -	3,600
Grain - - - - -	3,600
Ghi - - - - -	1,200
Cotton - - - - -	1,200
Miscellaneous - - - - -	1,400
	18,200

at 15 maunds = 2,73,000 maunds = 9,750 tons.

Travellers, 35,000 men.

* 18,000 carts, or 2,70,000 maunds of salt, bark, and forest produce, and 10,000 travellers go from Ongole to Cuddapah without passing through the town."

Para 17 "That this trade will be largely increased when a railway is built goes without saying. The line runs through the best part of the country, where alone it has a reasonable prospect of paying its way, and the above traffic returns are given, not as an estimate of what may be expected, but merely because nothing else of the kind was obtainable. Two-thirds of the traffic is from east to west."

Para. 19.

Para 19 "The chief articles of commerce are grain, hides, salt, tobacco, cotton, indigo, chillies, oil, bark, timber, and cloth. Cholum is the staple food of the agricultural class. Gram, wheat, and rice are also cultivated in small quantities, and sugar-cane towards the coast."

Para 25 "The Madras Canal is crossed close to Nandyál. This is a rising town of 9,000 inhabitants, situated in the richest part of the Kurnool district, of which it would be the most suitable administrative centre. Several leading roads meet in the vicinity, and from its central position it would form a good distributing point for famine purposes. It is provided with a fine irrigation tank which enables heavy crops to be raised. The people are industrious and well to do. Traffic at the Nandyál railway station is likely to be considerable. The revenue of Nandyál taluk is 2,45,000 rupees, and the adjoining taluks are similarly profitable. Their prosperity would certainly increase with the advent of a railway."

Para 65 "Rice, cholum, sugar, and indigo are the chief crops grown, but cotton and wheat, &c., are also cultivated in places. Woollen and cotton weaving are general, and there is some silk weaving at Dharmavaram, but these industries are all on a small scale. There is a considerable export of tanning bark, hides, and cocoa nuts."

Para 66 "The general course of trade is by the Bangalore and Hyderabad road, which takes the same course as the proposed railway. There is a good deal of cart and other traffic upon it, but no statistics are obtainable."

Government of India, Despatch No 114,
Railway, dated 28th July 1883

Para 6 "As a famine protective work, this line is of the utmost importance, as a means of supplying the Bellary and Kurnool districts with grain in time of scarcity from the irrigated lands on the east coast, and the rich and productive deltas of the Godavari and Kistna. The want of such communication was amply proved in the famine of 1876-78. The line selected passes, moreover, through taluks where the famine of 1877-78 was felt more severely than in any other part of the Madras Presidency. We fully concur in the views of the Government of Madras, that this railway is 'the most necessary protective work that can be named within Southern India.' It was strongly advocated by the Famine Commission."

Para 7 "As a means of lessening the present high cost of fuel on a large portion of the Madras Railway system, this line will also be of great value. The coal from the Singareni field will have ready access by it to the main line of the Madras Railway at a point far inland, as well as to the Bellary branch, and (if a third rail be laid between Guntakul and Bellary) to the Southern Mahratta Railway system. In addition to the coal, a fair general traffic may be expected. In ordinary seasons much of the country traversed is highly fertile, efficient means of transport alone being wanted to render profitable the cultivation of large tracts now lying waste, while a considerable trade is likely to spring up in timber from the extensive forests in the Nulla-Mulla hills. It is impossible to frame any reliable estimate of the traffic which this line will develop and more than a general idea cannot be given. We therefore hesitate to put it forward as a productive public work. Its first and principal object is protection from famine, and on this ground alone we deem its construction imperative, but there is every reason to believe that in a short time a fair return of capital outlay may be anticipated. As an illustration of the productiveness of another line, professedly protective only, we may mention that the Rewari-Hissar Railway has earned an average of 73 rupees per mile per week since the date of its opening, and was earning 100 rupees at the date of the latest returns received."

Para 3. "The necessity for the construction of such a railway as a protective work for the Karnul and Bellary districts in times of drought has been made so apparent by experience, and has been so forcibly insisted on by the Government of Madras, and in the Report of the Famine Commission, that the line is clearly one which should be undertaken by the State as soon as funds become available. I gather from the enclosure to your letter that a sufficient sum from the protective grant for commencement of the necessary operations is now in the hands of your Government, and that you anticipate expending about 15 lakhs on this project in the course of the current official year"

Secretary of State; Despatch, dated 4th October 1883, No 120

Para. 4. "I sanction the construction of this railway as a protective work, as proposed by your Excellency's Government, but I trust that no considerable delay will arise in carrying out the extension to Anantapur and Hindupur, the importance of which appears to me beyond question, though the ultimate junction with the lines of Mysore may, without objection, stand over for future consideration."

Para. 5 "From the reports of the engineer I gather that the traffic on the projected railway, though not likely to be considerable, may yet be of fair amount, and I think that, if strict attention is given to enforcing economy of construction in all practicable directions, the necessary capital outlay will not be left without a return of some value."

Nos 6 and 7.

CUDDAPAH-NELLORE SYSTEMS.

	<i>Miles.</i>
<i>Length</i> —Cuddapur-Nellore - - -	66
Kadiri Extension - - -	130
	<hr style="width: 50px; margin-left: auto; margin-right: 0;"/>
	196
	<hr style="width: 50px; margin-left: auto; margin-right: 0;"/>
<i>Gauge</i> —Metre	
	<i>Rs</i>
<i>Cost</i> —Cuddapur-Nellore - - -	36,64,000
Kadiri Extension - - -	85,00,000
	<hr style="width: 50px; margin-left: auto; margin-right: 0;"/>
	Rs 121,64,000
	<hr style="width: 50px; margin-left: auto; margin-right: 0;"/>

Direction of Line—From Nellore up the Valley of the Swarnamukhi, Kalastrī, and Vencatagiri, to the Tirupati Station on the Madras Railway. From Tirupati Station it is proposed to carry the line westward into the Cuddapah district as far as Kadiri *via* Damaracharla and Madanapalle, with a probable further extension to join the Bellary-Kistna Railway at Dhamaveram.

Précis of Correspondence

August 1883.—The Madras Government recommends the line from Nellore to Tirupati Station, with an extension, *via* Chandragiri, Suddum, and Candoor to Madanapalle, on the Mysore frontier, in view to a junction with Bangalore, and submits estimate for Nellore-Tirupati section, 66 miles, 36,63,870 rupees, or 55,513 rupees (or about 4,626 /) per mile

Government of Madras, Letter No 890, R., dated 20th August 1883

September 1883.—The Government of India request the sanction of the Secretary of State to the construction of the Nellore-Tirupati section, 66 miles, 36,64,000 rupees per mile, inclusive of rolling-stock, the extension westward into the Cuddapah district being subsequently considered.

Government of India, Telegram dated 22nd September 1883
Government of India, Despatch No 168, dated 26th September 1883

November 1883.—The Secretary of State sanctions the construction of Nellore-Tirupati section, and approves of the subsequent extension of the line westward into the Cuddapah district.

Secretary of State; Telegram, dated 13th November 1883; also Despatch No 143, R., dated 15th November 1883

February

Government of India, Despatch No 28,
Railway, dated 12th February 1884.

February 1884 — The Government of India informs the Secretary of State that it had been agreed with the Madras Government that the extension westward should be carried to Kadri, via Chundergherry, Calredapilly, Damaracheria, the Kuloor Ghat, Peclair, Voilpad, and Madanapalle, with a probable further extension to Dharmaveiam to join the Bellary-Kistna line, but that, until loan funds were made available for protective works, this line could not be undertaken

Population of Districts

	Area	Population.	Population per Square Mile
Cuddapah - - - - -	8,367	1,261,194	161
Nelore - - - - -	8,462	1,376,811	163

Population of Towns

Nellore - - - - -	29,922
Kalastru - - - - -	6,749
Vencatagiri - - - - -	7,524
Tirupati - - - - -	10,423

Advantages of Line, Probable Traffic, &c

Government of Madras, Letter, No 890,
Railway, dated 20th August 1883

Para 3 "His Excellency the Governor in Council is, however, strongly of opinion that the proposed line should not stop at the Tirupati Station, but should be continued in a westerly direction up the Valley of the Swarnamukhi, past the town of Tirupati, and near Chandragure, Suddum, and Cundoor to Madanapalle."

Para 4 "The construction of such a line would enable the produce of the Penner delta to be conveyed direct into the heart of the Cuddapah subdivision and the adjacent taluks of Punganur and Palmaner in North Arcot, which suffered greatly during the recent famine. The subdivision of Cuddapah and the two taluks of North Arcot just mentioned stand on a high plateau, shut in on the north, east, and south by difficult hill ranges, which prevent access to it except at one or two favourable points, where steep cart roads have been made. The results of local inquiries lead to the conclusion that the route suggested, by Tirupati, will not only allow grain to be conveyed direct from the Penner delta, but that it offers the best line of approach to the plateau, and from Madanapalle, on the frontier of Mysore, it is reasonable to suppose that the Mysore Government would be glad to extend the line ultimately to Bangalore."

Government of India, Revenue and Agricultural Department, Memorandum, 192 F,
dated 13th September 1883

Para 7 "It will be still more useful, from a protective point of view, if pushed on to meet the western line, which would enable it to act as a feeder to the more precarious regions of Bellary and Mysore"

Government of India, Despatch No 158,
Railway, dated 25th September 1883

Para. 4 "Other and important advantages are claimed for the Tirupati line by the Government of Madras, who point out that it is of the first importance that the country to the west of Tirupati, viz., the southern portion of the Cuddapah district, should be protected, and that this protection can best be provided by the establishment of communication with the Penner delta, and therefore strongly advocate the adoption of this route with an extension to Madanapalle"

Para 5 " We concur with the Government of Madras that the line should run from Nellore to Tirupati, and be hereafter extended to the westward so as to protect those portions of the Cuddapah districts which suffered most during the famine of 1876-78."

Para 2 "The construction of this line is recommended on the ground that it will connect the fertile districts on the east coast at the mouths of the Penner with the districts in the interior, which are liable to famine, and that it can also be extended at some future date to those portions of the Cuddapah district which suffered most during the famine of 1876-1878."

Secretary of State, Despatch No 141,
Railway, dated 16th November 1883

Para. 3. "I am to state that the Madras Railway Company at festival times deliver as many as 20,000 passengers in a week at their Tirupati Station, and that there is at all times a brisk traffic between this station and the town, giving a monthly average of over 20,000 passengers in and out, and 7,000 tons of goods."

Government of Madras, Letter No 103,
Railway, dated 2nd February 1884

Nos. 8 and 9

DAMACHERLA-VELLORE, ARNI-VELLAPURAM, AND OTHER MINOR FAMINE LINES IN MADRAS

Length—290 miles

Gauge.—Metre.

Cost.—Rs. 1,74,80,000.

Cost per Mile —Rs. 60,000.

Direction of Line —From Vellapuram on the South Indian Railway, *via* Arni, Vellore on the Madras Railway, and Chittur, to Damacherla on the extension of the Cuddapah-Nellore line to Kadiri, in all, about 140 miles. The minor lines referred to will probably be.—

	Miles.
Mayaveram to Mutupet - - - -	53
Palaikat to Dindigal - - - -	100

Prices of Correspondence

January 1883.—The line from Villapuram to Vellore is mentioned in a review of the wants of the Madras Presidency in regard to railway extension.

Government of Madras, Despatch No 6,
Railway, dated 18th January 1883

December 1883.—The whole of the lines above enumerated were decided upon as indispensable at a meeting held in December 1883 between the Public Works Member of Council of the Government of India and the Governor and Members of the Council of Madras.

Government of India, Despatch No 27,
dated 29th January 1884.

Advantages of Line, Probable Traffic, &c.

These lines are primarily intended for protection against famine. The lines have not yet been surveyed, nor have any traffic statistics yet been collected.

Nos 10 to 14.

Length:—	Miles.
Mozzufferpore-Hajypore - - - -	34
Sonepore-Hajypur - - - -	2½
Jhinjharpur-Dinajpur and Munihari branch	206½
Kaunia-Dhubri - - - -	54
TOTAL - - - -	297

Gauge.—Metre.

Cost:—

<i>Cost —</i>	<i>Rs</i>
Mozufferpore-Hajipur - - - -	22,00,000
Sonepur-Hajipur - - - -	14,20,000
Jhunjharpur-Dinajpur and Munhari branch - - - -	146,50,000
Kauma-Dhubri - - - -	56,00,000
	Rs. 2,38,70,000

Cost per Mile — Average of whole system, about 80,200 rupees

Direction of Lane.—The object of the proposed lines is to establish through communication between Bettiah and Baraich in the North West Provinces with Dhubri in Assam. For this purpose lines are proposed to complete the existing three breaks —

- 1st. From Sonepur to Hajipur and Mozufferpur
- 2nd From Jhunjharpur, the present terminus of the eastern branch of the Tirhut line, to Dinajpur on the Northern Bengal line.
- 3rd. To extend the Rungpur branch of the Northern Bengal Railway from Kauma to Dhubri.

Précis of Correspondence.

Secretary of State, Telegram, dated 6th February 1883. Also Despatch No 47, Railway, dated 8th March 1883

February 1883 —The Secretary of State sanctions the extension of Tirhut State Railway from Mozufferpur to Hajipur, 34 miles—26 lacs of rupees

Government of India, Despatch No 72, Railway, dated 26th May 1883

May 1883.—The Government of India apply to the Secretary of State for sanction to the following lines.—

	<i>Rs.</i>
Sonepur to Hajipur - - - -	14,24,114
Jhunjharpur to Dinajpur, with branch to Munhari - - - -	1,46,49,650

At the same time recommending the extension of the Rungpur branch of the Northern Bengal Railway to Dhubri

Secretary of State; Despatch No 126, Railway, dated 18th October 1883.

October 1883 —The Secretary of State sanctions those portions of the project for which complete estimates had then been prepared, i e. —

	<i>Rs</i>
Sonepur to Hajipur - - - -	14,24,114
Part of the line from Jhunjharpur to Dinajpur, with branch to Munhari	89,51,175

and approves generally of the rest of the project

Population of Districts

	Area.	Population	Population per Mile.
Patna - - - - -	2,101	1,559,638	742
Dinajpore - - - - -	4,126	1,501,924	364
Rungpore - - - - -	3,476	2,149,972	619
Mozufferpore - - - - -	3,003	2,198,383	728
Darbhanga - - - - -	3,004	2,196,394	731
Purneah - - - - -	4,957	1,714,795	346

Population of Towns.

Patna - - - - -	158,900
Mozufferpur - - - - -	38,223
Darbhanga - - - - -	47,450
Purneah - - - - -	16,057
Dinajpur - - - - -	13,042
Rangpur - - - - -	14,845

Para. 17 "It is difficult to say what the receipts on the whole line will be, but there seems to be no valid reason why they should fall short proportionately of those on the Tirhoot and Northern Bengal State Railways. During the past year the mileage receipts were 6,912 rupees and 8,049 rupees respectively, the average of which, 7,480 rupees, applied to the total length of the line under notice (410½ miles) would give the sum of 30,70,540 rupees on the gross receipts, and allowing one half for working expenses, the net profits would yield 4.69 per cent on the total cost of the line, 3,26,72,217 rupees. It may be accepted that this result will be attained in the course of a very few years after the opening of the line, and there is every ground for the assurance that the rapid development of traffic, evidenced everywhere on the railways of Bengal, will extend to this line also, with ultimate promise of still better results."

Government of Bengal; No. 1761, R,
dated 6th April 1883.

Para. 20. "The present communication with Assam is acknowledged to be as bad as it can well be, and at the same time it is incapable of any practical improvement, even by temporary expedients. The completion of the great scheme to which these papers refer will bring incalculable advantages to that province, especially in the promotion of its tea industry, and in the facilities to a free immigration from overcrowded districts for the clearance of its waste lands, and it is only by bridging the four intervening rivers, and thus enabling the metre gauge engine to pass without interruption to Dhubri, that an effective and permanent solution of the difficulty can be arrived at."

Government of Bengal, No. 1781, R,
dated 6th April 1883.

"Para. 3 After full deliberation, we are strongly impressed with the importance of completing this project, unconnected portions of which already exist, the communications will be most valuable as affording to the redundant population of Tirhoot a ready means of transport to the province of Assam, where the demand for labour is ever increasing, as well as in opening out some of the richest tracts of Upper Bengal, as a famine protective work, too, its benefits in time of drought would be incalculable. The Famine Commission of 1880 in their report state - 'The parts in which the effects of drought have been most serious are, (1) a tract extending along the borders of Nepal, from the Gunduk to the Kosi river, 250 miles by 50'. Again, 'In Northern Bengal, the districts of Behar and Bhagalpore, north of the Ganges, also require the extension of the lines already constructed.'"

Government of India, Despatch No. 72,
Railway, dated 26th May 1883

"Para. 10. The importance of this extension has of late been much enhanced by the fact that the construction of the Assam Railway from the Makum coal field will enable coal to be brought down to Dhubri, and effect large savings in the working expenses of the Northern Bengal and Tirhoot Railways."

"Para. 15. As a financial undertaking, therefore, the prospects are good, and as a means of opening out a country rich in produce, but subject at times to the evils of severe drought, we consider it of the greatest importance."

"Para. 23. No statistics are available from which to compute the probable receipts on the whole line. There is, however, no reason to believe that they will fall short, proportionally, of those on the Northern Bengal Railway. It is confidently expected that that line will, in the current official year, give a net profit of nearly 6 per cent. on its capital. Now, as the capital cost of this project will be less than that of the Northern Bengal Railway, mile for mile, and as the working expenses are invariably less in proportion as the line is longer, it follows that the net profits, if the mileage receipts are equal, will be more than

Note by the Chief Engineer of Bengal,
dated 11th March 1883.

than on the Northern Bengal Railway." It must not be forgotten also that, on the completion of the line to Dhubri, Assam coal can be introduced for use on this railway and the Northern Bengal Railway main line, by which the working expenses will be still further reduced."

Secretary of State, No. 126, R., dated
18th October 1883

"Para 7 The conclusions at which I have arrived are as follows The agricultural wealth and dense population of the districts to be traversed are well known But I am not disposed to think that the argument which is adduced as apparently weighing most with you, the probable value of the through communication across these districts to Assam, suffices to establish the profitable character of the traffic likely to pass over this projected line, and I am not able to attach more than a relatively small importance to this part of the traffic. An examination, however, of the project, shows that the contemplated lines, apart from any value they may possess for the purposes of this through traffic, will supply a satisfactory system of transport for the export produce of the district of Northern Bengal, which is indisputably abundant and valuable, and will serve to complete the system of railways of which the Tirhoot and Northern Bengal lines have been already constructed, to which lines those now proposed will form convenient feeders The connection of the whole series, so as to afford the means of communication from west to east, is an object, no doubt, worth securing, as it seems to be compatible with an arrangement of the lines well suited for meeting the general requirements of the probable traffic of the districts"

"Para 8 Accepting as a fair standard for reference the actual receipts from the existing railways of Northern Bengal, I find that for the year 1882 the net earnings of the Tirhoot line were 3.25 per cent, and of the Northern Bengal line 5.23 per cent, on the actual capital outlay The average mileage rate of the estimated cost of the new lines being almost identical with that of the actual cost of the two lines referred to, the probable net earnings may reasonably be reckoned at a sum intermediate between 3½ and 6½ per cent, which will justify the conclusion arrived at by your Excellency's Government that the project may properly be undertaken as a productive work."

No. 15

BARAKAR-NAGPUR

Length —627 miles
Gauge —Standard, 5 ft. 6 in.
Cost —Rs 5,30,00,000
Cost per Mile —Rs 84,500.

Direction of Line —From Nandgaon, the terminus of the present Nagpur-Chhattisgarh Railway, the line proceeds *via* Raipur, Simga, Sargaon, Bilaspur, Akaltara, Raigarh, Dugni, Chandil, Purulia, Ragonathpur, to Seetarampur, a station on the East Indian Railway This railway is considered to be the centre of the main system of protection of all the provinces of India affected by famine

Precis of Correspondence

Chief Commissioner, Central Provinces,
Minute dated 7th October 1863

October 1863 —The Chief Commissioner of the Central Provinces recommends the extension of Great Indian Peninsula Railway from Nagpur to Kamptee.

Government of India, Despatch No 52
dated 22nd June 1864.

June 1864 —The Government of India proposes the extension of the line from Nagpur to Kamptee by the Great Indian Peninsula Railway Company.

Chief Commissioner, Central Provinces,
Minute, dated 28th March 1868.

March 1868 — Sir George Campbell in his Minute advocates a railway line "from Nagpur to the east."

G. 61

5 Y 2

May

May 1878—The construction of the line from Nagpur to Dongargarh was ordered.

9th May 1878

March 1881—The Secretary of State sanctions the extension of the line to Nandgaon.

15th March 1881

October 1881—The Government of India informs Secretary of State that arrangements have been made for a preliminary survey of the line from Burrakar to Bilaspur, but that, until more was known as to the financial prospects of the line, the Government of India would not be in a position to consider the terms on which the line might be handed over to private enterprise

Government of India, Despatch to Secretary of State, No 121, dated 22nd October 1881

May 1882—The Government of India submits results of the preliminary reconnaissance of the line, and also copy of a communication received from Mr. Robert Miller, proposing to undertake the line on a limited guarantee, and recommends that negotiations may be commenced with Messrs Hoare, Miller, & Co, for the construction of the line on the southern route via Purlaha and Singhboom.

Government of India, Despatch No 120 A dated 8th May 1882

July 1882—The Secretary of State states that the country is not yet sufficiently explored to enable him to decide regarding the projected line, and that he entertains objections to a guarantee, even for a limited time, and upon limited capital

Secretary of State, Despatch No. 98, Railway, dated 27th July 1882

September 1882—The Government of India submit home the estimates of the line, with statistics of trade. They recommend the construction of the line via the southern route, on terms proposed by Messrs. Hoare, Miller, & Co, provided no other promoters are willing to take up the line on the same terms as concluded with the Bengal and North Western Railway.

Government of India, Despatch No 113 Railway, dated 9th September 1882

September 1882—The Government of India state that the Chief Commissioner, Central Provinces, concurs in recommending the southern route.

Government of India, Despatch No 118, Railway, dated 26th September 1882.

February 1883—States that the Secretary of State considers it inexpedient to enter into negotiations with Messrs. Hoare, Miller, & Co, until some more definite resolutions have been adopted as to the general policy to be pursued in future with respect to railway construction in India, more particularly in its financial aspect.

Secretary of State, Despatch No 21, Railway, dated 8th February 1883.

August 1883—The Government of India, in this Despatch, give an historical sketch of the project, discuss the advantages of the several routes proposed, touch on the question of gauge, supply all available information regarding the probable traffic, and recommend the construction of the line by Messrs Hoare, Miller, & Co

Government of India, Despatch No. 132, Railway, dated 18th August 1883.

October 1883—The Secretary of State declines to proceed further, or to enter into negotiations with Messrs Hoare, Miller, & Co., pending decision of the whole subject of railway extension by the Select Committee of the House of Commons.

Secretary of State; Despatch No 133, Railway, dated 31st October 1883

December 1883—The Bombay Chamber of Commerce memorialize in favour of the line being constructed at an early date, and on the broad gauge

Bombay Chamber of Commerce, Letter, dated 4th December 1883.

January 1884—The Government of India deprecate delay, and request that general sanction may be given to the project, in order that they may be enabled to take up the land, leaving all questions of finance and agency to be dealt with by the Select Committee of the House of Commons.

Government of India, Despatch No. 17, Railway, dated 29th January 1884.

Population of Districts*†

	Area.	Population.	Population per Square Mile
Bengal			
Mánbhúm - - - -	4,921	995,570	208
Lohardágá - - - -	12,044	1,287,128	103
Chota Nagpur - - - -	43,901	3,825,571	87
Singbhum - - - -	4,503	415,023	92
Burdwan - - - -	3,528	2,034,745	634
Central Provinces			
Raipur - - - -	11,885	1,098,405	92
Bilaspur - - - -	7,798	715,398	91
Bhandara - - - -	3,922	564,813	144
Native State Raigarh - -	1,486	68,304	43

Population of Towns

(Figures from the "Gazetteer of India")

Calcutta - - - -	794,645
Hughli - - - -	34,761
Burdwan - - - -	32,321
Ranigunge - - - -	19,578
Purulia - - - -	5,995
Chyebassa - - - -	4,823
Dugai - - - -	4,692
Anundpur - - - -	5,484
Seraikela estate - - - -	66,347
Raipur - - - -	19,116
Bhandara - - - -	11,433
Nagpur - - - -	84,441
Bombay - - - -	644,405

Advantages of Line, Probable Traffic, &c.

The best account of the proposed line is contained in the following Despatches from the Government of India, No 132, Railway, dated 18th August 1882, and No. 17, Railway, dated 29th January 1884.

Despatch No 132, dated 18th August 1882

" 1. With reference to our telegrams, dated 5th March and 6th July last, and your Lordship's reply to the former,* and also to the desire expressed in the 4th paragraph of your Lordship's Despatch, No 21, Railway, dated the 8th February last, to be 'furnished with full evidence of the general soundness of the proposed plans and of the grounds on which the particular lines have been selected,' we have now the honour to forward the results of the further surveys and other investigations which have been made during the past season, together with as full a statement of the whole case as it appears practicable or necessary to prepare.

" Historical Sketch

" 2. The project of a railway from Nagpur into the Chhattisgarh District of the Central Provinces was first formally mooted by Sir Richard Temple † in 1863, when Chief Commissioner of those Provinces, in a Minute which dealt very fully and clearly with the traffic and other relevant circumstances. It was supported by Sir George Campbell ‡ when holding similar office in 1868, but with the view of a connection with the Bay of Bengal by navigation down the Mahanadi. The question remained in suspense, however, pending the discussion of the principle of railway extension,

which

* 5th March - Para 4 of your Railway Despatch, No 21, of 8th February this year. Location surveys promised in para 7 of our Railway Despatch, No 112, of September 18th last year will be submitted after close of season. If any further information required, please explain.
 † 5th March - "3ours, 4th. Location survey alone will not be sufficient. Estimated cost and traffic also required of proposed line and alternative routes and gauge. Likewise evidence as to work being Protective or Productive."
 ‡ 6th July - Bengal Nagpur Railway. Result of survey, Etarampur to Bilaspur, 368 miles, 208 lacs, add Bilaspur to Nandgaon, 116 miles, 98 lacs, totals 484 miles, 368 lacs. Nandgaon to Nagpur best cost converted line, allowing value metre gauge materials and stock, roughly 118 lacs. Details shortly. Grand total, 5 crores. We strongly recommend early concession to Messrs. Miller."

† Minute, dated 6th October 1863

‡ Minute, dated 26th March 1868

which terminated in the Secretary of State's acceptance of Lord Lawrence's Minute of 1869. In that Minute this project was favourably mentioned, and consequently Mr. Morris, who had become Chief Commissioner, went very thoroughly into the matter,* with the result that the Government of India recommended the construction of a State Railway to Raipur on the metre gauge, but the Secretary of State declined † to sanction the project without further proof of its financial success. In 1872 Colonel Keatinge, Officiating Chief Commissioner, submitted a revised project, which the Government of India deemed financially satisfactory, but the Secretary of State desired further investigations by Mr. Morris, which were reported in due course, but without eliciting the desired sanction ‡. In 1874 Mr. Morris submitted a further examination of the project as far as Dongargarh, with the complete surveys and estimates which had in the interval been prepared, and it was, in 1876, a fourth time recommended to the Secretary of State by Lord Northbrook's Government, but on this occasion with the substitution of the broad for the metre gauge. The Secretary of State hereupon accorded a general sanction, subject to financial considerations, but negatived the adoption of the broad gauge §. The famine of 1876-78¹ prevented any commencement until 1878-79, but the line was gradually opened to Dongargarh in 1882, and extended to Nandgaon, 19 miles further, early in the present year.

* Minute, dated 21st May 1870

† No. 82, Railway, dated 18th July 1872

‡ Despatch to Secretary of State, No. 68, Railway, dated 18th April 1872

Reply, No. 82, Railway, dated 18th July 1872

To Secretary of State, No. 29, Railway, dated 12th February 1873

Reply, No. 63, Railway, dated 1st May 1873

§ Minute, dated 6th March 1874, to Secretary of State, No. 29, Railway, dated 3rd February 1876

Reply, No. 43, Railway, dated 27th April 1876

" 3 The design of carrying the line into the heart of the Chhattisgarh country, and even on to Bengal in due time, did not escape notice during the period which has thus been reviewed, but during the earlier years the necessity for so full a measure was considered too remote, and during the later ones an apprehension would seem to have prevailed lest the advocacy of too large a project might imperil even the small one, from Nagpur to Dongargarh, then under immediate consideration. Information was, however, collected, surveys were commenced, and a more definite shape was imparted to the matter by proposals made in June 1877 by Mr. Prestage to form a Company to construct the entire line from Nagpur to Calcutta direct. These proposals were found to be impracticable, but, in view of the postponement of State construction on account of the famine, Mr. Morris was invited to consider what concessions might fairly be made to a private company prepared to undertake the line. Here the matter practically rested, the Nagpur-Nandgaon section being in the meantime in progress, until 1881, when we received, both direct and from your Lordship ¶ overtures from Messrs. Burn & Co and Messrs. Hoare, Miller, & Co for the formation of companies to construct a broad-gauge line from Barrakur, on the East Indian Railway, to Nandgaon, and the purchase and conversion to that gauge of the State Railway from Amgaon to Nagpur.

¶ Despatch, No. 106, Railway, dated 11th August 1881

" 4 In consequence of these overtures, preliminary surveys and other inquiries were carried out in the ensuing cold season, and on the 8th May 1882 ¶ we forwarded the results to your Lordship, together with Messrs. Hoare, Miller, & Co's proposals, of which we approved, with the exception of desiring that the limited guarantee of interest should be in rupees instead of in sterling. We likewise forwarded** proposals from Messrs. Burn & Co., which comprised, in addition to the construction and conversion as above, the purchase of the Bengal Ironworks. Fuller information followed, †† but your Lordship declined to continue negotiations with Messrs. Hoare, Miller, & Co., until (1) our views had been received on 'the general policy to be pursued in the future with respect to railway construction in India, especially in its financial aspect,' and (2) the results of the further surveys during the past season and other information had been supplied.

¶ No. 126 A, Department of Finance and Commerce

** Despatches, Nos. 83 and 148, Railway, dated 1st July and 7th November 1882.

†† Despatches, Nos. 113, 118, and 170, Railway, dated 9th and 26th September and 19th December 1882.

1 Despatch, No. 98, Railway, dated 27th July 1882, and No. 21, Railway, dated 8th February 1883

Telegram, dated 9th March 1883.

" 5 Our views on railway policy in general were submitted in our Despatch, No. 29, Finance and Commerce, dated the 23rd January last, and we therein specially advocated (paras 26-27 and 67) the concession of this railway on

on the 'Bengal Central terms' This recommendation has since been repeated in our telegram dated the 6th ultimo.

" The remaining information required by your Lordship we will now endeavour to supply, inviting attention to the documents which accompany this Despatch.

" *Route*

" 6 Passing over the discussions which preceded the adoption of the line, now open, from Nagpur to Amgaon, the first question for settlement has been whether Sambalpur, or its vicinity, as an obligatory point, should be reached by the direct line of the old road through Raipur and Fulhar, or by a more northerly one passing near or through Bilaspur, and along the left bank of the Mahanadi. The two routes were carefully surveyed in 1876-77 by Mr F L O'Callaghan, C I E, and a sufficient staff. The direct line was found to possess certain advantages as far as Raipur, but from a short distance beyond that town it was ascertained to pass through a rough, hilly, and scantily-peopled country, fully as expensive to traverse as, but affording none of the advantages, mineral as well as agricultural, notoriously possessed by, the tract north of the Mahanadi. This conclusion, concurred in by the Chief Commissioner, Mr Morris, and other officers concerned, has never been questioned, and may be finally accepted.

" 7. The next question which arose was, how the left bank of the Mahanadi thus preferred should be reached from Dongargarh. Three proposals have been put forward and tested by survey —

" 1st. Direct line from Dongargarh to Bilaspur, or to Sargaon on the Manari river (a few miles short of Bilaspur), and thence eastward through Raigarh, &c. This was surveyed by Mr O'Callaghan in 1876-77.

" 2nd. From Dongargarh, through Nandgaon to Raipur, and thence north-east, through Loan and across the Seonath, to fall into No 1 line beyond Sargaon or Bilaspur. Surveyed by Mr. O'Callaghan, as far as Raipur.

" 3rd. From Dongargarh through Nandgaon to Raipur, thence north by Simgah across the Seonath at Gurba to Sargaon, and so eastward, as before. This route has been surveyed by Mr Penny.

" Of these routes the second was advocated in 1877 by Mr. Morris, when condemning the *direct* line to Sambalpur, because he considered Raipur, which the first route leaves far aside, to be an obligatory point. But on further consideration he held, in 1880-81, that this route would 'sacrifice the best interests of the Bilaspur district,' the richest portions of which lie to the west and north-west.* He consequently decided on the third route, which is a medium between the two, and is the final project for extension, which has been since matured. The soundness of his conclusion was confirmed by the inquiries made of the Commissioner of the Chhattisgarh division and other local officers by our Honourable Colleague, Mr Hope, when visiting Nagpur and Nandgaon in March last. We consider it to be finally established by the able report of Mr J B Fuller the Director of Agriculture in the Central Provinces, forwarded herewith, which shows the necessity of affording a fair balance of railway facilities to the wheat and oilseed producing tracts of Chhattisgarh on the one hand, and to the soils best suited for rice on the other. Whether the line should turn eastward immediately after crossing the Manari at Sargaon, or at a point closer to Bilaspur (on the south), is a matter of detail which will depend on the prospects, when construction is actually in hand, of the project for connecting Chhattisgarh with Central and Northern India by a line from Bilaspur,† through the Rewah coal fields, to Etawah or Lalitpur on the Bhopal-Gwahar Railway.

* Chief Commissioner's Letter, No 1789, of 4th March 1881

† See our Despatch, No 83, Railway, dated the 2nd June 1883.

" 8. It has been assumed so far by the Central Provinces authorities, that the line would unquestionably be continued eastward from Bilaspur, through the tract north of the Mahanadi already referred to, so as to serve the remaining eastern portion of those provinces. But a new aspect was imparted to the discussion when, in 1881, the project of a through line was seriously taken up on the applications of Messrs. Burn & Co and Hoare, Miller, & Co. The Bengal Government submitted a serious of notes by Mr. Ball, of the Geological Survey, Mr. Hewitt, the Commissioner of Chota Nagpore, and the Central Provinces authorities. Retaining Barrakur, Ramgunj or their vicinity as the objective point, in accordance with previous generally accepted ideas, Messrs. Ball and Hewitt advocated totally different routes therefrom to Bilaspur.

" Mr. Ball was in favour of a line passing through Purulia, Seraikila (Chyebassa), Kolabira, Padampur, and the fertile tract north of the Mahanadi, already referred to, and he pointed out that this line would pass through the copper ores of Singbhoom and the coal fields of Hengir, and would allow of a branch being thrown off from some suitable point at Cuttack, the head-quarters of Orissa. Mr. Hewitt, in the interests of his province, strongly urged that the line should go west from Barrakur up the valley of the Damuda, then scale the Chota Nagpur plateau to Ranchi and Lohardugga, and proceed through the Native States of Burwah, Sirguja, Uproa, Korba, and down the Huedo to the vicinity of Bilaspur. He also proposed a branch from the vicinity of Lohardugga to Gya. He claimed for this project the advantages that it would pass through the coal fields of the lower Damuda valley, of Sirguja, and of Korba that it would open up the resources of Chota Nagpur; and that it would prove as remunerative as the southern route favoured by the Central Provinces and Mr. Ball. His views were explained at great length in three Notes on this occasion, and were also summed up in a Note dated 11th June 1882, and presented to your Lordship in England.

" The Central Provinces authorities pointed out that Mr. Hewitt's route would not meet the wants of their Eastern districts. The line through these districts would, they showed, run for the most part through well-cultivated country, capable of great improvement, as also benefit the fertile district of Sambalpur, which is already cultivated to the extent of 750,000 acres, and open up the Hengir coal fields, while to the north of it stretch extensive ranges of sal forests, the timber of which can be floated to the vicinity of the line by the several large streams that flow from the north at right angles to the Mahanadi, and would undoubtedly prove a financial success. They also argued that the northern or Sirguja route would neither be any advantage to the Central Provinces nor, on Mr. Hewitt's own showing, remunerative in itself. Finally, as a middle course which might meet the chief needs of Chota Nagpur without sacrificing those of the Central Provinces, they suggested the possibility of a route leaving their 'southern route' in the locality of Suadi and crossing over the Chota Nagpur plateau to Barrakur.

" 9. As this important question could obviously not be otherwise settled, we ordered, on the recommendation of the Bengal Government, a thorough investigation of the three rival routes, to be made during the cold season of 1881-82, by an ample and efficient staff under Mr. W. H. Parker, M.I.C.E.

" 10. The preliminary report of this investigation was forwarded to your Lordship on the 8th May 1882 (Despatch No 126, A, Finance and Commerce), with Messrs. Hoare, Miller & Co's proposals and our provisional opinion, in which the Bengal Government concurred, that the southern route was the proper one to follow. On the 9th September 1882 (No 113, Railway), we transmitted Mr. Parker's full report, accompanied by a final opinion in favour of the southern route by the Lieutenant Governor of Bengal, and our

* No 1607, Railway, of 15th June 1881

† Secretary of State's Despatch, No 98, Railway, of 27th July 1882

‡ Colonel Mayne's Note, dated 26th March 1881

Chief Commissioner's Letter, No 3009, of 7th April 1881

our own to the same effect. The concurrence of the Chief Commissioner, Central Provinces, in this conclusion was submitted to your Lordship with the Despatch, No 118, R, of 26th September 1882. We likewise received an intimation from Messrs Hoare, Miller & Co that they would accept no other route. Messrs Bura & Co took the same view, in their proposals forwarded with our Despatch No 148, R, of 7th November 1882. On the 19th December 1882, we also reported (Despatch No 170, R), that at a conference held at Gya between our Honourable Colleague Mr Hope and certain local and other officers deputed by the Government of Bengal, the 'southern route' was unanimously approved of, Mr Hewett himself concurring, and stating that he had now satisfied himself that the wants of Chota Nagpur would be best satisfied by lines in a transverse direction, viz, from Benares and Gya, through the province southwards, to Cuttack.

"11. The grounds of this decision in favour of the southern route, as to which all authorities in India and Messrs. Hoare, Miller & Co, are unanimous, can be best gathered from a study of the very voluminous correspondence accompanying the preliminary and final reports of the survey of 1881-82, which are before your Lordship. But they are well stated in the letter of Government of Bengal, No 2519, R, of 31st July 1882,* and are summarized in paras 3 to 5 of our Despatch quoted marginally. The particulars of the three routes as then reported were as under,—

* Enclosure No 2 to our Despatch, No 111, Railway, of 26th September 1882

ROUTE.	Length in Miles	Estimated Cost, including Land (Conventional Sterling)	
		Per Mile	Total
1881-82		£	£
Northern, red - - - -	303	7,542	2,065,000
Intermediate, purple - - -	376	7,843	2,940,000
Southern, blue - - - -	367	3,006	2,900,000

"The northern route may be said to have been condemned, because it (1) would not serve the eastern part of the Central Provinces, (2) allowed of no branch to Orissa, (3) did not suit the wants of Chota Nagpur itself, (4) would be expensive to work, owing to numerous and long heavy gradients, (5) afforded small traffic through a large portion

"The intermediate route was generally rejected, as passing through a rugged country, involving expensive working, and not meeting generally the wants of any of the provinces concerned.

"The southern route was accepted as meeting satisfactorily the wants of all, viz, (1) serving the Central Provinces in full, (2) admitting readily of a branch to Orissa, (3) traversing the whole Manbhoom and Singbhoom districts, (4) intercepting at right angles, within easy distance, all the traffic westwards from Chota Nagpur, (5) commanding the largest extent of cultivated and culturable country, and also as being (6) the shortest in length, and (7) the cheapest to work, in consequence of its easier and shorter gradients and its flatter curves. We may add that the above conclusions, both administrative and financial, are now corroborated by the location survey of this route completed last cold weather, the report on which accompanies this Despatch, together with a letter of approval from the Lieutenant Governor of Bengal.

"12 It will have been observed that the junction of this route with the East Indian Railway has been spoken of by
5 Z various

various writers in the course of the correspondence, as at Barrakur, at Sitarampore, and at Raniganj. We may therefore mention that Sitarampur is the station finally selected, in order to avoid a double crossing of the Burakur and Damooda rivers and to secure the most favourable site on the latter. The matter is explained by Mr Paiker in the Enclosure No. 1 to our Despatch No. 126, A, Finance and Commerce, dated 8th May 1882.

"13 Although we have thus finally selected the 'southern route,' our review of the question of route would be incomplete without some notice of the alternative of carrying the line from the locality of Chyebassa direct to Howrah *via* Midnapur. This alternative had our careful consideration in 1881, and when ordering the preliminary surveys in that year we addressed the Bengal Government as per margin*. We likewise examined the proposal of Mr Prestage in 1877, already alluded to (*vide supra*, para. 3), and came to a conclusion adverse to it, on the score of its being both expensive and unnecessary. We consequently remarked, in our Despatch No. 118, Railway, dated 26th September 1882, that the Midnapur route did not require any present consideration.

"14 In January last, however, Mr Prestage reopened the question so we directed a reconnaissance to be made, under Mr Paiker's orders, of the best line from a suitable point on the southern route, near Chyebassa, *via* Midnapur, to Howrah. The result, together with the opinion of the Government of Bengal upon Mr Spring's reconnaissance and a letter which we have addressed to the Bengal Chamber of Commerce, will be found among the enclosures to this Despatch.

"15 It will be observed that, comparing the route from Dugni to Howrah direct *via* Midnapur, and to Calcutta, *via* Sitarampur and the East Indian Railway, there would be by the former a saving of 71 miles in distance run, but an excess of 67 miles of new line to be constructed, and of 1,28,01,245 rupees in capital outlay. Moreover, by the interest on this additional sum, by the absence of the cheap coal obtainable at Sitarampur, and by the heavy maintenance of embankments and large bridges subject to frequent floods and to the risk of cyclonic waves, the Midnapur line would be so weighted that a ton of goods could be carried as cheaply *via* Sitarampur. In time there might be some saving, but this would be ill compensated for by a terminus at Howrah, which, now that the bridge at Hooghly is in progress, is generally considered to be less convenient than the east side of the river.

"16 Independently of the above considerations, there can be no doubt between the amount of traffic which would be served by the two. The peculiar virtue of the Sitarampur route in acting, as has been explained in paragraph 19, as an intercepting drain to the traffic of the whole country west of it, would be lost by the adoption of its rival, and the bulk of the traffic of Chota Nagpur and Manbhoom would continue, as at present, to wend its way painfully in bullock carts to the various stations on the East Indian Railway. The first portion of the route, from Dugni to Midnapur, is confined by hills and sparsely populated, the second, from that town to Calcutta, is already well served by the Midnapore Canal, which last year carried 329,000 passengers and 128,000 tons of goods by steamers and boats, and might prove so formidable a competitor that the line might be reduced to the through traffic from beyond Dugni as its principal remuneration. The contrast between the two is clearly put in paragraph 82 of Mr Ruseley's note, to which, as also to the Lieutenant Governor's opinion contained in No. 2948, R., dated the 28th July 1883, we would invite attention. It is quite possible that at some future date, when the trade of the Central and Upper Provinces, and of Chota Nagpore, has largely developed, a line from Dugni to Howrah, or preferably Hooghly, may be found

* Extract, para. 3 of Letter to Government of Bengal, No. 622, B. C., dated 18th August 1881. Enclosure No. 4, to Despatch to Secretary of State, No. 191, Railway, dated 22nd October 1881.

3 "The Government of India, in considering the question of the direction of these lines, has preferred the northern line to any running from Calcutta, *via* Midnapur and Cuttack, because the railway being undertaken to a great extent for famine protective purposes, it seems that the coast canals will partially protect this latter country, while it will be easy in the future to make a junction of the northern line, from some point north of the Mahanadi river, with Cuttack, should such a measure prove eventually desirable."

found to be remunerative, but there is nothing at present to justify the abandonment for it of the obvious advantages of the Sitampore route.

" 17 This conclusion, adverse to the Midnapore route, is in harmony with that arrived at on previous occasions when a railway to Midnapore, with extension westward, has been under consideration, and we see no ground for questioning its soundness

" Gauge.

"We touch on this question in accordance with the request in your Lordship's telegram of the 9th March last, but shall do so with reference solely to the circumstances of the particular line under consideration. We do not feel called upon to enter into any discussion of the relative merits of the broad and metre gauges in the abstract. During the earlier discussions regarding the Nagpur-Dongargarh Railway, except those in 1867, when the Government of India expressed itself on Imperial grounds in favour of the broad gauge, it was assumed that the gauge should be metre, because, as would appear, that gauge was at the time believed to be generally suitable to the traffic demands and limited financial resources of India. In 1876, however, when the necessity for discriminating between mere local lines and main communications, liable to heavy demands for through traffic, special exports or military exigencies had become apparent, and had been recognized by the Secretary of State for India in the case of the Punjab Northern and Indus Valley State Railways, Lord Northbrook's Government advocated* the adoption of the broad gauge for the Nagpur-Dongargarh Railway. The grounds assigned were the convenience to the grain traffic, and the saving in coal supplied from the Warora Collieries by avoiding transshipment at Nagpur, but we believe the probability of eventual extension to Bengal was also taken into account. The Secretary of State disapproved of this departure from the original project, on the ground that 'no reasons are assigned for the proposal which might not be applied to every new line of railway,' and the line to Nandgaon has, consequently, been constructed on the metre gauge.

" 19. We understand the policy, in respect of gauge, accepted for some years past by the Government of India and the Secretary of State, to be as follows. The metre gauge is to be invariably adopted for provincial and local railways, 'specially constructed for a slow goods traffic,' designed 'to stimulate the exchange of commodities, and provide for a goods traffic with special reference to local needs and local means, regarding which it may certainly be said that the traffic upon them will be light,' and that 'a network of subsidiary lines' of this nature, at the lowest possible cost, is to be promoted as far as possible. The broad gauge, on the other hand, is recognized as suited to 'supplementary through lines of communication,' or those which are 'desirable on strategic and military grounds,' and while demands for such are to be examined with caution, they may be admitted where the traffic can be shown to require it, and, in the case of existing metre gauge lines, relief to the trade of the country may be afforded even 'by relaying them on the broad gauge.' †

" 20. Concurring in this policy, as our recommendations in respect of various railway projects on the metre gauge will have shown, we consider that the present instance is undoubtedly one for the adoption of the broad gauge

"(a) The line is a 'through line,' covering the shortest distance between Bombay and Calcutta, and, though the through traffic may not be very heavy, the double break of gauge, which would result from interposing the narrow gauge between two broad gauge lines, would cause serious delay, inconvenience, and expense.

5 z 2

"(b) The

* Despatch No 29, dated 3rd February 1876

† The quotations are from Lord Lytton's speech in the Legislative Council on 27th December 1877, and Minute dated 12th March 1878, appended to the Financial Statement of 1878-79. We use them as the latest and clearest declarations on the subject

“(b) The line will likewise, if the Nizam’s railway be constructed, become a ‘through line’ to the Deccan and the Madras Presidency from the whole of Eastern India, and from Northern India also if the Bilaspur-Katni-Etawah project should be carried out.

“(c) The line is also a grain-exporting line to both ports from a point which may be termed the ‘traffic shed,’ somewhere in the Chhattisgarh country. This point will vary according to the speed, cost of transport, and facilities offered in each direction. Bombay will probably retain much of the area it now commands, Calcutta will also draw largely on the eastern districts of the Central Provinces, as it once used to do and will profit by the vast increase of cultivation which may be confidently expected in them. A break of gauge, we may remark, is especially prejudicial to the wheat trade, because not only is the margin of profit on this article, in competition with America and other countries, so narrow that an addition of even about 4 annas per ton is undesirable, but also the uncertainty as to when a consignment once started will, after breaking bulk, reach the port of embarkation, deranges the shipping arrangements, and often leads to loss on freight which has been taken up. To the Bombay grain trade we have ascertained that the break at Nagpore is already a source of uncertainty, delay, and expense, which demands early removal, on the Calcutta trade interposition of a similar obstacle at Sitarampore would be unjustifiable. But, besides this, the Nagpur-Nandgaon metre gauge line already finds difficulty in disposing of the traffic crowding to it, and we consider that the adoption of this gauge throughout would, in view of the prospects of the grain trade, especially in wheat and oilseeds, be an unprovoked act, certain shortly to demand a costly remedy.

“(d) Moreover, the line is a trunk line, destined inevitably, and we hope at no distant date, to receive four important connections, viz (1) Raipur to Vizagapatam, 372 miles, (2) Bilaspur, through the Rewah Coalfields, to Saugor and Etawah, 352 miles; (3) Chyebassa (or other suitable point) to Cuttack and Pooree, 236 miles, and Dugni (or other suitable point) to Chota Nagpur, Mogulserai, and Gya, 388 miles. Whether these connections be on the broad gauge or on the metre, the traffic to and from them will be a material addition to the traffic proper to the main line, increasing the necessity for broad gauge on the latter.

“(e) Again, the line will be, as we shall presently show, essentially a famine-relief line. Whether the occasion be (as nearly occurred in 1868-69) a famine in the Central Provinces, or (as will ordinarily happen) a demand on the proverbial ‘granary of India’ for relief to Behar, to Bundelkhand, and the North West, or to Western and Southern India, the broad gauge carrying power and the absence of break will be essential to an effective response.

“(f) Moreover, the line will be a mineral line, carrying supplies of coal for other railways, especially the first and third of those named in clause (c) above, and will thus get another special addition to the ordinary traffic on it, affording a further reason for adopting the broad gauge.

“(g) The mercantile community in general are decidedly in favour of the broad gauge throughout. In May 1878 the Bombay Chamber of Commerce memorialized us, strongly deprecating the adoption of the metre gauge from Nagpore eastwards. The Bengal Chamber of Commerce take the same view, and we have

* 29th November 1861
8th March 1862
2nd May 1863

have lately received from them three communications* remonstrating against extensions on this gauge from Dongargarh. In this they are fully supported by the Lieutenant Governor of Bengal

“(h) Finally, both the firms which have made proposals for forming a company to construct the line, Messrs Hoare, Miller & Co., and Messrs Bunn & Co., make the adoption of the broad gauge and the conversion of the metre gauge section from Nagpore to Nandgaon a *sine qua non*. They may be presumed to know what is best in their own interests.

“We have no hesitation in holding that the above reasons are special, not such as might be applied to any line of railway, and that they justify, consistently with the present accepted policy, the adoption of the broad gauge in this case. We may add that there need be the less hesitation as to the conversion, seeing that the cost will be borne by the Company, and the material and stock returned to us can be readily utilized on other State railways

“ Cost

“I think it should be laid down that expensive station buildings are unnecessary. The roadway, with the permanent way, and all bridges, should be thoroughly substantially built, but the barest necessities should suffice, at first, at least, for station buildings. I think considerable economy may be secured by avoiding expensive wells and watering arrangements at all stations, and taking advantage of some of the rivers crossed by erecting the watering arrangements at the bridges.”

“21 *Sitampur to Bilaspur*—The results of the location survey made during the past season are now reported (Enclosure, No 1) as 365½ miles, estimated by Mr. Parker to cost, including land, 2,98,96,970 rupees, or 81,853 rupees per mile. In this estimate, it is possible that some rates may prove to be rather low, but materials and labour are probably cheap throughout a great part of the country traversed. Upon this subject generally we concur with our Director General of Railways (Colonel Stanton), whose remarks, recorded in 1861 with reference to this line, are quoted marginally. On the whole, and assuming that a private company will look actively after their own interests in every particular, we think that an estimate of 82,000 rupees per mile should be ample to cover all contingencies. The total for this section will thus become 2,99,70,000 rupees, or 300 lacs in round numbers.

“22 *Bilaspore, via Raipur, to Nandgam*—This section has been completely surveyed and estimated for on the metre gauge, with the result shown in the margin. Considering the easy and well-ascertained nature of the country, we think it will be sufficient to allow 81,500 rupees per mile for this section, or 93 lacs of rupees in round numbers. If the line should turn eastward a little south of Bilaspore (*supra*, para 7), this amount may not be reached.

“23 *Nandgaon to Nagpur. Purchase and Conversion*—The proposal of Messrs Hoare, Miller, and Co., in respect of this is that the Company are to purchase the Nagpur and Chhatsgarh Railway ‘at the cost price of that line, plus the net simple interest on cost calculated up to the date of transfer, and as calculated by Government.’ It has been understood in the course of the negotiations, though not clearly expressed in the sentence quoted,† that the ‘cost price’ means the total amount spent by Government, with the exception of the value of the metre gauge permanent way and rolling stock, which will be returned to Government by the Company as the conversion proceeds.

“24 We consider that the best method of carrying this arrangement into practice will be for the Company to take over the existing line as it stands, immediately on the execution of their contract, at the price booked as its cost, plus the balance of the interest account on the date of transfer, minus a suitable allowance for depreciation of way and stock up to date. The Company would then work the line, the earnings of which would be a set-off to interest on their capital during the construction of their whole undertaking, would convey over it to Nandgam and intermediate stations a supply of broad gauge materials wherewith to effect the conversion and push on the extension, and would ultimately effect the conversion, from one or both ends, at their own

	Miles.	Total	Rate per Mile
		Rs	Rs
Nandgaon to Raipur	43	24,30,000	56,612
Raipur to Bilaspore	71	45,89,138	64,847
	114	70,19,138	61,571

† Enclosure No. 3 to our Despatch, No 126, A, Finance and Commerce, dated 8th May 1863.

‡ As it is in Clause IX of Messrs Bunn and Company's proposal, forwarded with our Despatch No 148, R., dated 7th November 1862.

convenience and without interruption of traffic. The metre gauge materials and stock, as released, would be made over to the officers of Government at Nagpur, or wherever it might be found convenient to send them, with reference to their ultimate destination. The materials and stock so received should then be valued, with reference to their condition at the date of delivery, their destination, and the market price of the day, and the amount thus determined should be adjusted against the total cost price at which the line was originally handed over.

" 25 It is obviously impossible to frame beforehand anything more than a rough estimate of the net cost to the Company of the converted line. The Kanhan bridge, which was originally built for a road only, and has for some time been considered of doubtful security for even the metre gauge line now passing over it, must be restored to its original purpose, and a new bridge constructed for the broad gauge line. It is understood that in the other bridges (with one exception) no material alterations are required to abutments or piers, but broad gauge girders will have to be substituted for the present superstructure. The permanent way must likewise be replaced, and extra ballast provided. Minor alterations of stations and workshops, as also new locomotives and rolling stock, will of course be required. The condition of the metre gauge material on its return to Government will depend on the time it may have been in use, and the treatment it may receive, and its value at the time of transfer can only be guessed at. But we enclose, as the nearest approximation practicable, a memorandum prepared in our Public Works Department by the Officiating Director General and the Consulting Engineer for State Railways, which shows a result of 1,36,32,000 rupees, summarized in the margin, as the cost of the converted line. The value of metre gauge materials to be returned to Government has been roughly calculated on the basis of existing market prices, with allowance for depreciation, cost of dismantlement, and cost of carriage to Bhosawal, which has been assumed as the point to which the material might have to be conveyed for distribution to other metre gauge lines.

" The amount recovered by the State under these arrangements, which would be about 63 lacs of rupees, would be used in reduction of debt, or in augmentation of the cash balances, and thereby avoiding borrowing, as contemplated in the 'Remarks' regarding this project in Schedule A. of our Despatch No. 26, Finance and Commerce, of the 23rd January last, where this recovery is estimated at 50 lacs.

" 26. The total cost of the railway from Sitarampur to Nagpur on the broad gauge would thus be as stated in the margin. This sum is larger by about 30 lacs than that telegraphed to your Lordship on the 6th ultimo, chiefly in consequence of more detailed information, and greater margin allowed with respect to the cost of conversion. But it is little more than Messrs. Hoare, Miller, & Co were prepared for, and about what we ourselves originally anticipated."

" 27. The information upon record regarding the produce, the capability for development, and the wants as to communications of the Chhatgarh country is exceptionally abundant. The documents specified marginally are those which contain special references to traffic, and have all, we believe, been laid successively before your Lordship. They all illustrate the fact of a pressing need of railway communication penetrating into the heart of the eastern districts of the Central Provinces, and the certainty that such communication would be remunerative. They eventually led to the sanction and commencement of the Nagpore Dongargarh Railway in 1878.

" 28. When

Cost of existing line, 148 miles, on 30th June 1885, including rolling stock under supply, but without allowance for present Kanhan bridge, not to be utilized - - - - -	Rs	
		96,78,000
Balance of interest account up to 30th June 1885* - - - - -		2,07,000
Estimated gross cost of conversion, at 48,000 rupees per mile		71,00,000
Total Gross Cost - - - - -		1,69,82,000
Deduct—		
(a) Allowance for depreciation of way and stock up to 30th June 1884 - - - - -	Rs.	6,50,000
(b) Approximate value of materials to be transferred to Government on 30th June 1885* - - - - -		27,00,000
		33,50,000
Total Net Cost of Converted Line - - - - -	Rs.	1,36,32,000

* This would be reduced—

On 30th June 1886 to - - -	Rs	26,50,000
" " 1887 to - - -		24,30,000

	Miles	Estimate.
		Rs
Sitarampur to Bilaspur - - -	365½	3,00,00,000
Bilaspur to Nandgaon - - -	114	95,00,000
Nandgaon to Nagpur - - -	148	1,36,32,000
TOTAL - - -	627½	5,29,32,000

* See para. 8 of our Despatch No. 126 A, Finance and Commerce, dated 8th May 1892, and Enclosure No. 2

Mr Temple, 6th October 1863.
Mr Morris, 21st May 1870
Mr Armstrong, December 1871
Mr Morris, 27th September 1872.
Ditto, 6th March 1874.
Mr Chisholm, 24th July 1877

* Letter from Chief Commissioner, Central Provinces
 Note drawn up in Revenue and Agricultural Department

" 28. When submitting Messrs Hoare, Miller & Co's proposals to your Lordship on 8th May 1882, we considered these facts to be so well established and well known, and to be so strongly confirmed by the voluminous enclosures to our Despatch, No 121, of 22nd October 1881, as also by the rapid growth of the wheat trade, and the readiness of private enterprise to embark on the construction of the railway with very limited support from Government, that it was superfluous to offer more than the general opinion in favour of the remunerativeness of the enterprise at an early date, which is contained in para 9 of our Despatch, No 126, A. In reply, however, to your Lordship's subsequent inquiries, we furnished the documents* forming the fourth enclosure to our Despatch, No 113, Railway, of 9th September 1882. The first and second enclosures likewise abound in interesting and valuable information as to traffic and produce furnished by the local and survey officers, which it was impossible to summarize. Further information being still desired, we now beg to forward reports by Mr H H Risley, Officiating Deputy Commissioner of Manbhoom (who was placed on special duty, at the suggestion of the Lieutenant Governor of Bengal) on the trade statistics, &c, of that part of Bengal affected by the proposed railway, and by Mr F B Fuller, the Officiating Director of Agriculture in the Central Provinces, on the trade resources of Chhattisgarh

† Possessing an area of 43,026 square miles, and a population of 4,908,991

" 29. Mr Risley, a very careful officer, who has given much attention to trade questions, and has already made useful contributions to our knowledge of Chota Nagpur, carries his description down to the Hengir Coalfield, on the confines of Sumbulpore. He shows that, owing to the geographical formation of the country, the main currents of export trade follow the natural slope from west and north-west towards the east, and converge gradually on the East Indian Railway between Burrakar and Burdwan. The imports return by the same routes. Consequently a railway running round from Chyebassa to Sitarampore not only has no water communication to fear, but, owing to the peculiar conformation of the country, both commands the traffic of its own strip and cuts off, so to speak, the traffic of an enormous tract of country to the west, which can only find an outlet by flowing towards the new line. It crosses, as it were, the mouth an estuary, and intercepts its entire contents. The declared imports and exports of certain specified articles Mr. Risley states to amount to 428,300 and 1,022,000 maunds respectively. But, after explaining that no one who possesses a fair general knowledge of Chota Nagpore would accept these figures as approaching the truth, he adds, 'no attempt has been made here to anticipate the enormous extension of the import trade which will follow upon the opening of the railway'. At present Chota Nagpore† is in a primitive stage of economic development. No attempt has been made to estimate the quantity of coal, dyewoods, iron, limestone, and tassar cocoons which the railway may be called upon to carry. The possible development of rival coalfields, the success of the Barrakar Ironworks, the demand which may spring up for indigenous dyes and the prospects of tassar silk in the European market, all these causes are too obscure and too complicated for it to be possible to anticipate their results and express them in a statistical form. It can only be said that these factors may have an important influence on the future railway, and that some of them stand a fair chance of coming into play on a large scale within the next 10 years.

" 30. Mr Fuller, whose statistical experience as Assistant Director of Agriculture in the North Western Provinces is well known, presents coloured maps indicating the density of the population, and the proportion of soils suited for wheat and oilseeds, together with a sketch of the routes. Owing to a large portion of Chhattisgarh consisting of zemindaries and chiefships, these facts as to population and soil constitute a more reliable indication than estimates of produce. It may, however, be mentioned that in the *Khalsa* portion

portion only of the Raipur, Bilaspur, and Sumbulpore districts, the total cropped area is 3,804,147 acres, while the black soil suitable for wheat, but still uncultivated, is 2,007,832 acres. The annual demand for salt is put at 450,000 maunds, and for European piece goods and metals at 120,000 and 80,000 maunds respectively. Confidence is expressed that by the removal of the difficulty of communication 'a large export would be at once created . . .

' . . . In this export trade wheat, rice, and oilseeds 'would form the staple commodities, but a considerable 'accession of traffic may be expected from forest produce, 'especially lac.' In illustration of the effect of railway facilities, Mr. Fuller states that the railway took comparatively little when open only to Amgaon, but the extension to Dongargarh raised the exports to 754,65' maunds, and that to Nandgaon to 1,492,653. We may supplement his account by the following extract from a communication lately received from the Commissioner of Chhattisgarh —

"The Nagpur and Chhattisgarh metre gauge line was opened in February with a great flourish of trumpets to Raj Nandgaon. In 21 weeks that line has carried 5,147 tons of goods, mostly grain. Carts have been traveling into Nandgaon carrying grain at the rate of 1,000 to 1,200 per day. And if the line was only open to this, I believe that Raipur would become an immense grain depot, where sufficient would be stored to keep the line occupied the greater part of the rains. As it is, there are immense stocks of grain here. The heavy traffic over the eastern road (i.e., the 43 miles between Raipur and Nandgaon) has cut the road to pieces, and the two rivers make cartage so difficult, that the traffic is now stopping; but the people are very anxious about the railway. This is not surprising, when you look at the rise in cart hire: formerly 3 rupees covered the cartage of one cart = 12 to 15 maunds from this to Nandgaon; this year the rates have risen from 12 to 16 rupees per cart for the 43 miles. This high rate swallows up nearly the whole of the profits, so that much of the latter grain dealings have been carried on at a loss. . . .

"There is no doubt that Chhattisgarh is a perfect granary, with considerable opportunity for expansion. The dense population is all crowded together into a comparatively small area, but there is room and to spare all round for all the superfluous population that exists, and good land in abundance waiting for people to cultivate it. They will be forced to take to migration to these cultivable wastes when the railway drives up prices. At present a man earns enough in three days to keep him for seven, so he idles away four, and he will have no inducement to work until he sees that he can get a fair price for the grain raised. Now the prices that reach the cultivators can barely cover the cost of cultivation. . . . The whole country is covered with speculators, agents from Bombay firms, &c. Some of them have made a good thing of it, but the rise in cart hire has reduced the profits to a very low ebb."

"31. These accounts by Messrs Risley and Fuller, together with the other information previously supplied, and the memorandum by Mr Jones, show that the railway will have an ample and increasing traffic arising from stations throughout the greater part of its length. There is, however, a portion of about 80 miles near the centre of the line from which much cannot be expected locally, beyond the sal timber which the vast adjacent forests supply. This section will, however, be relieved from unremunerativeness by the through traffic in grain and oilseeds from Calcutta, which the eastern part of Chhattisgarh and Sumbulpore will afford. We have already alluded [para. 20 (b)] to the point, or 'traffic shed,' whence the produce will flow eastward, and to the difficulty of predicting whereabouts it will lie. It may, however, be expected to be ordinarily quite as far west as Bilaspur, and thus to secure a very large through traffic for the section to which

which we allude. The Hengir coal also will travel eastward over this section until it meets that produced from the Bangany collieries.

" 32. Hitherto we have dealt only with the traffic normal to the localities traversed by the line, but it must not be overlooked that the line may calculate also on receiving, to a greater or less extent, according to circumstances, (1) an additional normal traffic from the connections or subsidiary lines referred to above [para. 20 (b) and (d)], and (2) an abnormal grain traffic in times of scarcity or famine, which are, unhappily, too frequent in one part of India or another.

" 33 In concluding this branch of our subject we have only to remark that we consider a mass of concurrent testimony, such as that which has been brought forward, to be far more to be depended upon than any statistical tables compiled from returns of present traffic passing particular points, because a large portion of traffic everywhere avoids such points, and existing traffic is no sufficient criterion for railway enterprise in any country known to be greatly improvable

" 'If the cost of carrying a ton of goods is reduced, by the substitution of railway conveyance for carts, from three annas per mile to half an anna, it is certain,' urged Lord Northbrook's Government in 1876, 'that when, as in this case, the produce and the demand exist, the number of tons carried will increase in some proportion to the reduction in the cost of conveyance. The increase of traffic from the lowering of the rate for carriage is a simple and certain consequence of the ordinary laws of trade, and should be calculated on in any estimate of railway earnings'

* No 20, Railway, 3rd February

" Remunerativeness

" 34. On this point we would, in the first instance, invite attention to the fact that a long series of local authorities have for 12 years past insisted on the remunerativeness of a line reaching the heart of the Central Provinces, have supported their opinions by statistics which were admittedly within the truth, and have been willing to incur the risk of the undertaking out of the limited resources provincially assigned to them. The net return they anticipated was not less than from 4 to 5½ per cent. The Governments of Lord Lawrence, Lord Mayo, and Lord Northbrook have in succession favoured such a line, and the latter, while anticipating 'certainly 2½ to 3 per cent at the outset,' reckoned on an increase of traffic, 'seeing that the country to be opened out is rich in produce, which has hitherto been locked up for want of means of communication' Experience is already verifying the anticipations; the first section alone earned 2·15 per cent. in 1882, and the extended line to Nandgaon compares, as per margin,† for the first three months of the current official year, with some of the principal and well-established lines in India.

" 35. Regarding the larger project now under consideration, we can fairly say that it is supported by statistics not less complete, and traverses tracts of country not less promising or less distressed for want of an outlet, than those just referred to. It possesses, moreover, two singular advantages, in working, that of good coal procurable, actually at one terminus, within easy distance of the other, and also at a convenient point on the line between the two, in construction, that of cheap labour, of abundant timber, and, if your Lordship should give effect to our recommendations regarding the Bengal Ironworks, of permanent way and other iron and steel requirements manufacturable close to Sitarampore. Mr Parker‡ has calculated the net profits at 4½ per cent, irrespective of these special advantages, while the Lieutenant Governor of Bengal thinks that this is probably an under-estimate, and that 'the prospects of the undertaking are most hopeful.' The opinion of mercantile men, some of them well acquainted with India

	Receipts per Mile per Week
† Oudh and Rohilkund - -	233
Northern Bengal - -	169
Rajputana-Malwa - -	239
Indus Valley and Kandahar -	247
Nagpur Chatisgarh - -	244

† Report, dated 10th June 1882, paras. 79 to 99
Bengal Letters, No. 2519, R, of 31st July 1882, and No 2948, R., of 28th July 1883

and the localities affected, may be gathered from the fact that they have been ready to embark in the undertaking with, at most, a guarantee of 4 per cent. for a period only sufficient to put it in working order throughout

"36. If the proposal were to construct the Sitarampur Naudgaon section as a broad gauge State Railway, and to convert to that gauge the open continuation to Nagpur, we should have no hesitation in recommending the work as technically 'productive,' that is to say, as one which 'may fairly be estimated to pay, within a maximum limit of five years from the date of the line being open for traffic, 4 per cent. on the capital invested.'* Much more, then, are we able to support an application from reliable private individuals for the limited aid in starting the undertaking which alone they ask, and deem to be sufficient.

* Secretary of State's Despatch, No 1, Financial, dated 6th January 1881.

"37. As to the exact nature of this aid, we have already, in our Despatch No. 29, of 23rd January last, recommended the adoption of the 'Bengal Central' terms and the debit to the head of 31. *Famine Relief and Insurance*, of whatever interest charge may be incurred. Regarding this we may remark that the liability of Government will be for interest on an amount only one-fourth more than would be required to complete the existing project, but with the corresponding advantages that (1) a broad gauge line will be obtained instead of a narrow one, (2) the liability will terminate in a few years instead of being for a permanent increase to the debt of India; (3) a certain share of profits in the future, and certain rights of purchase will be secured.

"Circumstances having somewhat changed in the money market and otherwise since January last, we may state that we see no objection to such reasonable modification of the 'Bengal Central' terms, in harmony with their general principle of a strictly limited guarantee, as may suffice to secure the early launching of the undertaking. For instance, we should see no harm, but gather some advantages, in the debit of interest during construction to capital, and the commencement of the guarantee agreed on from the date of the opening of the line. We telegraphed to your Lordship in this sense on the 10th ultimo in the case of the Bhopal-Gwalior-Cawnpore Railway.

"38. So far, we have treated the question as one of direct liability, return and profit. But the indirect advantages of railway extension are too important to be ignored. One of your Lordship's predecessors addressed the Government of India on this subject as follows—

"Though equal profits may not be obtainable from future lines, this does not constitute an answerable objection to further extension. For lines which in themselves are perhaps unremunerative may be of the highest political and social, and, indirectly, even of great commercial value. Thus a line which connects important strategical points may produce an economy of military expenditure far more than sufficient to cover any loss which may arise from the working of the line itself. Again, a line which facilitates the carriage of food in districts where harvests are uncertain may be of the highest value, though not directly remunerative. The same may be said of lines which facilitate the intercourse of remote and backward districts with the more advanced, or which enable the people to come more easily and frequently to markets, to courts of justice, and so forth, or enable magistrates to visit their districts with greater convenience. These are only a few of the many indirect advantages attending the extension of railways, which justify us in laying down the principle that direct commercial success is not to be regarded as the one single test of their value.' (Despatch No. 3, dated 16th January 1863.)

"These remarks have special applicability to the present case.

"39. The first, and perhaps one of the most pecuniarily valuable of the indirect advantages of this railway, is the power it will confer of increasing the land revenue of the

		Cost	
		Miles	£
A.	Existing line - - -	148	1,000,000
	Completion - - -	476½	3,040,000
		627	
	Total to complete - - -		4,000,000
B.	Proposed project - - -	627½	5,293,200
	Loss recovered - - -		270,000
	Net Amount to be guaranteed £		5,023,000

* Despatch, No 68, R., of 18th April 1872
Despatch, No 29, R., of 30th February
1876

Raipur and Bilaspur Districts at their approaching resettlement in 1885-88. This point has been repeatedly mentioned in the correspondence to which we have alluded in para 29,* and has been twice brought specially to the notice of the Secretary of State. Colonel Keatinge estimated at 2½ lacs of rupees the increase of assessment attributable to the new railway facilities alone. Supposing that it amounted to 1½ annas per acre, the annual proceeds would be about 2,75,000 rupees or 3,00,000 rupees at once, and probably double this 20 years hence, on the expiry of the revised settlement, owing to increase of cultivation and rise in prices. This would be a material and permanent set-off to any temporary liability the Government might now incur in starting the line. We would invite special attention to the remarks upon it of the present Chief Commissioner of the Central Provinces, Mr. Jones, in the memorandum which is appended to this Despatch, adding that, unless the work be commenced without delay, it will be impossible to enhance the land revenue on the ground of facilities which do not exist.

“40. Another indirect gain, which is certain to be large, is the increase of receipts, in which the Government will share, from the additional traffic which this railway will throw upon the Great Indian Peninsula Railway at one end and the East Indian Railway at the other.

“41. An obvious, though less easily calculable, indirect advantage is the relief to exchange which must result from every increase to the exports of India. Considering that the tract commanded by the proposed line is one which produces in vast quantities, and is capable, with better communications, of producing far more largely still, the two commodities, grain and oilseeds, which are in demand in Europe, we think this advantage is too important to be ignored.

“42. But equal to, or it may be far greater than, either of the indirect advantages just named, in its pecuniary value to the State, and fraught also with influence on human life, is the protective effect of this line in time of scarcity or famine. Chhattisgarh is a region which has now been ascertained meteorologically to be favoured with a rainfall more uniform, constant and sufficient, from year to year, than any other in India. It is thus, while almost exempt, except on very rare occasions, from risk of famine, able to come with grain supplies to the aid of other provinces where scarcity or famine prevails. But railway communication is indispensable to the use of this gift with promptitude and sufficiency. The risk which the province itself ran during the dearth of 1869, for want of such communication is described in Mr. Morris's minute of 6th March 1874. The great additional help it might have afforded, had such existed during the famine of 1876-78 in Southern and Western India, is obvious, and was recognized by Sir John Strachey in the latter year, in the following remarks on the Nagpur-Chhattisgarh Railway.

“It is of urgent necessity to supply means for its construction at the earliest possible moment, as will be specially useful as a means of bringing food grains down to the main line of railway in the Deccan, and thus be of great value in time of scarcity, as has been very truly remarked by Sir A. Clarke.”

“Supposing the line now under consideration to be constructed, the whole resources (vastly increased) of the tract referred to will be available at either end for famine relief of Behar and Bengal on the one hand, and of Western and Southern India on the other. Moreover, the addition hereafter of a branch to Cuttack will render impossible in Orissa a disaster such as that of 1869, while the connection of Bilaspur with Bundelkhand and Northern India will be a most important safeguard against famine in that quarter †.

“In fact, so important do we consider the protective aspect of this project, that we should have been prepared to recommend

† *vide* para. 20 (c) of this Despatch, and Despatch No 83, Railway, dated 2nd June 1883.

recommend it to your Lordship as a protective work, had any necessity existed for doing so.

" 43 In conclusion, we trust that we have now supplied all the information which your Lordship desired to possess, and that it may be held to warrant an arrangement with Messrs. Hoare, Miller & Co., at the earliest practicable date "

Despatch No. 17, dated 29th January 1884

" Para 1. In our Despatch, No. 132, Railway, dated the 18th August last, we submitted what appeared to us to be all the information regarding the projected Nagpur-Bengal Railway which your Lordship had called for, and, after urging the importance of the question from various points of view, we repeated the hope, more than once previously expressed, that your Lordship would come to arrangements at the earliest practicable date with Messrs. Hoare, Miller & Co for the construction of the line

" 2 It is with much regret that we have received your Lordship's Despatch No 133, of the 31st October last, which informs us that, pending the result of the inquiries of a Select Committee of the House of Commons, your Lordship is unwilling to enter upon arrangements with Messrs. Hoare, Miller & Co. on the basis proposed by them

" 3. Considering that this railway, in connection with two others,* is the centre of the main system of protection of all the provinces of India affected by famine, and that the proposals in our Financial Despatch, No. 29, of 23rd January 1883, for constructing the three by private enterprise, with the aid of funds, which are now, subject to your Lordship's sanction, available, stood entirely by themselves, we had hoped that your Lordship would have dealt with them, as in the case of the Western Deccan Railway concession in November last, separately and irrespective of the general question of utilizing private agency for railway construction in India.

- * 1 Bhopal Gwalior Cawnpore
- 2. Bilaspur-Etawah

" The fact that these railways are of a highly protective character has, we trust, been demonstrated to your Lordship's satisfaction in paras. 14 to 17 of our Despatch, No 269, Finance and Commerce, of 24th September last, and in para 13 of our further Despatch of this date, on railway policy, to which the opinions of the members of the Famine Commission now in India are appended

" 4 While abstaining from further remonstrance against the postponement of a decision as to the financial basis on which this project is to be carried out, and the agency to be employed, until the Select Committee of the House of Commons have reported, we feel it our duty to submit to your Lordship proposals by which the intervals which must elapse before these points can be decided may be used to the best advantage.

" 5. In the first place, we would point out that a postponement of decision on the two points above mentioned need be no bar to the present consideration of the questions of route, gauge, cost, traffic, remunerativeness, and indirect advantages, and to the formal sanction of the project as such

" We learn from the 4th paragraph of the Despatch under reply that your Lordship considers the information furnished to be 'most valuable,' and infer that it is considered sufficient for the purpose. We are now able to supplement it in a few particulars, which we proceed to mention

" 6 *Route*—We have received your Lordship's Despatch, No. 136, of 31st October last, forwarding a request from Mr. C. Magniac, M.P., that a sketch survey may be made of the Howrah-Dugni route, on the ground that present information is so insufficient that it is impossible to make any reliable comparison between it and the Sitampore route. Mr Magniac was, we presume, unaware that Mr. Spring, one

one of our engineers in the railway branch of the Public Works Department, had recently made a very careful reconnaissance of the section from Dugni to Midnapore, which we forwarded with our Despatch of 4th August last, and that, as regards the Midnapore Howrah section, the whole country from Burdwan downwards has been, during the last 25 years, so thoroughly surveyed, contoured, and practically studied, in the course of the measures for minimising the loss by floods of the Damooda, Darakesur, Rupnarayan, Silha, and Koosye rivers, that no new surveys could add anything material to our present knowledge of the subject.

" 7. Our honourable colleague in charge of the Public Works Department, Mr Hope, has recently visited Midnapore, accompanied by the Director General of Railways (Colonel Stanton), and the Superintending Engineer, South-western Circle (Mr Vertannes), for the purpose of re-investigating the whole question

" As regards the engineering question, it may be explained that the course adopted with regard to the floods has been to protect certain portions of the country by means of allowing the 'spill' of the great rivers to go freely over others. The area thus inundated by the Damooda river, over its right bank, extends from above Burdwan down to an embankment near the Oolooberia canal. It is about 63 miles in length and from 4 to 14 miles in width, and it is frequently submerged to depths varying from 8 to 18 feet. The portion of this across which it is understood that it is proposed to take the railway is eight miles wide. A somewhat less impracticable line is that discussed and estimated for in Mr Spring's report and Mr Levinge's note accompanying our Despatch, which passes between the canal and embankment above referred to across a neck of land four miles wide between the Roopnarayan and Damooda, but it is also open to very serious risks and objections

" As regards traffic, it may be explained —

" 1st That it is an error to suppose that there is any considerable traffic flowing into Midnapore from the west. This was ascertained by our honourable colleague's personal inquiries of the Midnapore traders, assembled with the assistance of the Collector, and is corroborated by scrutiny of the canal returns, which show that out of an average total annual export and import traffic of 150,000 tons, only 12,000 tons (viz, 8,000 export eastward and 4,000 import) belong to Midnapore itself

" 2nd That of the canal traffic itself, the greater part is received on the two reaches nearest Calcutta, and consists to a considerable degree of boats passing through it from marts on one side to marts on the other, to which traffic the railway would be no assistance whatever

" 3rd That the needs of the Midnapore district are now fully provided for by the existing combination of good roads, rivers, and canal, and would be comparatively little benefited by a railway. This sufficiency of provision was corroborated by the agent of Messrs. Watson and Company, who own large zemindaries in this vicinity. The canal service is by no means indifferent, as has been asserted, and it is about to be greatly improved by the Calcutta Steam Navigation Company, who will place on it within a month's time four new steamers, which they have constructed specially for the purpose.

" In short, there can be no doubt that the line from Dugni to Siterampore would open out more country, and be of much greater use to commerce than that to Howrah

" 8 Gauge — On this subject we may supplement our previous remarks in favour of the broad gauge by reference to paragraphs 8 and 9 of our Despatch, No 9, Railway, dated the 22nd instant, and to the letter quoted marginally,* which we forward herewith. The Bombay Government have likewise addressed to your Lordship a Despatch,

* From Government of Bengal, No 4513 R. Railway, dated 27th December 1883, para 5

No. 23 of the 12th ultimo, strongly supporting a letter from the Bombay Government in the same sense

"We would also bring to notice the fact that the question of the necessity of doubling the Great Indian Peninsula Railway from Bhoasul, in the direction of Nagpur is now under serious consideration, and that the measure certainly cannot be long deferred.

"9 *Traffic*—We append a statement showing the exports from Chhattisgarh during the first six months of 1883, which is the result of special registration by Mr. Fuller, the Director of Agriculture in the Central Provinces

"It has also been brought to our notice that gunny bags for the wheat exported from Chhattisgarh are at present sent round from Calcutta to Bombay by sea, and thence go by rail into the interior. On the opening of the proposed railway they would, of course, be sent direct, as there would be a saving of from 16 to 17 rupees per ton in freight alone, irrespective of marine insurance, and landing, and dispatching charges. On this point we enclose an interesting memorandum by Mr. A. P. Ralli, of the well known firm of Ralli Brothers. The cheapening of the through transit would, moreover, give a stimulus to the mill industry in the neighbourhood of Calcutta, as the article is used for various purposes in Western India.

"We have obtained further information regarding the forests in the vicinity of the line of railway. These may be put in three groups—

* 1st. *Singbhoom and Lohardugga*—Here there are about 200 square miles of reserved forests of sâl alone, and further reservations are contemplated. There are also open or district forests and private forests. These would furnish two millions of cubic feet in three or four years, to begin with, and a large regular supply, probably not less than 6,000 tons annually, when proper facilities for getting the timber out have been provided. At present the whole of Bengal is supplied from Nepal with sâl timber, which is very largely used. But the Nepal forests are believed to be rapidly becoming exhausted, and the price is rising. The Inspector General of Forests (Dr. Schlich) calculates that the sâl from the Sarunda and other forests in Singbhoom can be put into railway trucks at the adjacent stations and laid down at Sitarampore at Rs. 1 4 per cubic foot. Its corresponding prices at other principal markets within easy reach, and the present prices of Nepal sâl and teak at the same places, are shown in the margin. The trade will be profitable at the outset, and must develop largely as the Nepal supplies fall off

	Teak	Nepal Sâl.	Singbhoom Sâl
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Calcutta	- 2 3 -	- 2 3 -	- 1 7 3
Mokameh	- 2 6 0	- 2 3 -	- 1 7 1
Mogra Bora	- 3 10 4	- 2 6 -	- 1 10 10
Allahabad	- 3 12 9	- 2 6 -	- 1 15 -
Dacca	- 2 4 -	- 2 6 -	- 1 13 9

"2nd *Tributary States*—The forests in these are known to be very extensive, but no details are available. They produce will, of course, have a longer carriage to bear in order to compete with forests more favourably situated.

"3rd *Chhattisgarh*—The forests in this group are estimated to comprise 2,000 square miles of good high timber, the bulk of which is sâl. About one-fifth of the area belongs to Government, and the rest to feudatory chiefs and zemindars. Dr. Schlich estimates that they could yield not less than 10,000 tons of sâl timber annually, without reducing their permanent productiveness. With railway outlets from Bilaspur to Etawah, and to the westward, this timber would, no doubt, find a large market.

"From the above it will be seen that the sâl forests in the tracts referred to will, with the aid of the proposed railway, be able to supply the requirements of the whole of India, subject merely to the limitation caused by cost of carriage. The forests will likewise afford vast supplies of shellac, lac-dye, and myrabolams, and may be expected to stimulate the trade in these articles.

"The Hengur coalfields are at present being carefully re-examined by Dr. King, Deputy Superintendent of the Geological Survey, especially along the line of railway, and the Government of the Central Provinces will make borings

borings or shafts at any spot he may select for the purpose of proving the coal. Its general quality is, of course, already well known, having been more than once professionally reported on.

"10 *Remunerativeness*—On this subject we think it as well to point out that, although we have strongly advocated this line on account of its famine-protective urgency, we have always considered it likely to be 'productive' in a technical sense also (*see* paragraph 35 of Despatch No 29, of 23rd January 1883, *et seq*). If the indirect returns to be received from it, which are explained in paras 38 to 42 of our Despatch of 18th August last, be also taken into account, it will be highly remunerative. It is thus both a 'famine' and a 'remunerative' line, but the former quality need be no obstacle to its being constructed by a private company, nor the latter to its being treated as of famine urgency, irrespective of considerations of general policy.

"11. The preceding five paragraphs have related to our first proposal, that formal sanction should be given to the project, as such, leaving the question of financial basis and urgency to await the Report of the Select Committee of the House of Commons.

"12 Our second proposal is that, as soon as sanction has thus been accorded, we should be permitted to commence operations so far as to take up the land throughout, and make the earthwork wherever labour is readily obtainable. By these means, and especially the taking up of the land, which is usually a tedious process, several months, or a whole season, may be saved towards the ultimate opening of the line. The necessary funds, which would not be large, we should be prepared to advance from the Productive Public Works Grant, subject to repayment, as in the case of the South Mahratta Railways, in the event of the ultimate decision being to give over the project to a company.

"Independently of the gain in time towards opening, two other reasons for the course we recommend may be adduced—First, the re-settlement of the land revenue of the Bilaspur and Raipur districts will commence next year, and, unless the railway be in progress, it will be impossible, as we have already pointed out in paragraph 39 of our Despatch of 18th August 1883, to provide for the enhancements which may fairly be attributed to railway facilities; secondly, the scarcity to which reference is made in the 3rd paragraph of the letters from the Government of Bengal forwarded herewith prevails with some severity in the tract between Dugni and Sitampore, and the prompt commencement of earthwork on this section would be a very welcome relief.

"13 In conclusion, we trust that our present *ad interim* proposals may meet with your Lordship's approval, and that we may be informed accordingly by telegraph."

See also the following correspondence.—

(a) Note that accompanied letter from Chief Commissioner of Central Provinces, No 2314—129, dated Nagpur, 28th June 1882

(b) Note drawn up in office of Secretary, Revenue and Agricultural Department

(c) Letter from Deputy Commissioner of Lohardugga, No 60, R., dated 13th April 1882

(d) Letter from Deputy Commissioner, Manbhoom No 758, R., dated 4th June 1882

(e) Letter from Deputy Commissioner of Singbhum.

(f.) Report on the trade of Chota Nagpur by Mr H. Rusley, which accompanied letter from Deputy Commissioner

Commissioner of Maubhum to Bengal Government, No. 409, R., dated 7th May 1883.

(g) Letter from the Director of Agriculture, Central Provinces, No 240, dated Nagpur, 11th July 1883.

(h) Minute by Chief Commissioner, Central Provinces, on trade resources of Chhattisgarh, dated 1st August 1883.

No. 16.

BHOPAL-JHANSI-GWALIOR AND JHANSI-CAWNPORE.

Length.—385 miles.

Gauge.—Broad.

Cost.—Rs. 3,50,00,000.

Cost per Mile—Rs. 90,000

Direction of Line—From Bhopal, now the terminus of the Bhopal Railway *via* Lalitpur to Jhansi, and thence to Gwalior. From Jhansi a branch leads to Cawnpore, on the East Indian Railway.

Précis of Correspondence.

September 1883.—The Government of India strongly urges the construction of this railway through the agency of a company, adding that the line is essential to protect Bundelkhand against famine

Government of India; Despatch No 140, Railway, dated 8th September 1883.

October 1883.—The Secretary of State states his unwillingness to enter into further arrangements with a company for the construction of this line pending a decision on the general subject of railway extension in India by the Select Committee of the House of Commons.

Secretary of State, Despatch No 131, Railway, dated 25th October 1883

November 1883.—The Bombay Chamber of Commerce memorialise in favour of the line.

21st November 1883.

December 1883.—The Government of Bombay urges the importance of the early construction of the line.

Government of Bombay, Despatch No 22, dated 6th December 1883

January 1884.—The Government of India deprecates further delay, and request permission to take up land, and begin the earthwork for a broad gauge railway.

Government of India; Despatch No 11, Railway, dated 22nd January 1884

Advantages and Probable Traffic, &c

The present condition of affairs shows how important it is that early steps should be taken for making a suitable provision against famine in Bundelkhand by the construction of the protective lines provided for in our Despatch to your Lordship, No 29, Finance, dated the 23rd January 1883.

Government of India; Despatch No 140, Railway, dated 8th September 1883.

“The proposed line would connect the Great Indian Peninsula with the East Indian Railway system by continuous broad gauge lines, and while opening out a country which is populous and fertile, and known as a large wheat and teel-seed-producing district, would shorten through communication between Cawnpore and Bombay by a distance of 115 miles.”

Bombay Chamber of Commerce, Letter dated 21st November 1883.

“The Agent, Governor General for Central India, has declared that the scheme was one which, after the fullest consideration and consultation with all the authorities connected with that part of India, he had accepted and adopted as an absolutely indispensable line for opening out that most important province; that the country which it would open out from Bhopal to Gwalior was, in the lower portions, exceedingly rich in wheat and well-peopled, and certainly there were no great difficulties in the way of railway construction; that in the neighbourhood of Bhopal and Bhilsa the

the production of wheat was so enormous, in good years; that it lay rotting on the ground, because there were no means of exportation; and he believed that above Bhilsa and between Jhansi and Gwalior, which he knew well, the country was fertile and populous."

Government of Bombay, Letter No. 22,
6th December 1883

Para. 4 "We would therefore take this opportunity of recording our conviction that any small saving that may ultimately result from the refusal to British capitalists of the amount of security which the money market at present requires in the form of Government guarantee or subsidy before embarking in Indian railways, will be dearly purchased by the loss which every day's delay in the development of the railway system imposes, both directly and indirectly, on the revenues of India. Whatever may be the weight of the objections to lend the credit of the State, except within narrow limits, to undertakings which do not promise an immediate profit upon invested capital, they cannot apply to the case of a line like that proposed from Bhopal to Gwalior and Cawnpore, on which a remunerative traffic is certain. If the terms on which private capitalists are prepared to take up such railways cannot be at once conceded, let Government revert to their former policy, and carry them out as State Railways, with borrowed capital. No permanent burden will be imposed on the finances of India by the adoption of this course; on the contrary, the development of railways is likely to be even more profitable in the future than it has been in the past. The improvement of internal communications is at present what the country chiefly needs, and a liberal financial policy in respect to railways is especially necessary in the interests of the export trade and of the producer, on whom the burden of taxation mainly falls. We submit, therefore, with all deference, that any policy which will at once provide India with the railways she requires is to be preferred to one which only results in inaction.

Government of India, Despatch No. 11,
Railway, dated 22nd January 1884

Para. 1. "We pointed out that this necessity was emphasised, from the point of view of famine protection, by the recent scarcity in Central India, Bundelkhand, Rajputana, and the Punjab, and also, that the line was of primary importance to the rapidly growing export trade in grain and seeds, which is beginning to tax the capabilities of the existing lines to the seaports, and will require additional facilities at no distant date."

Para. 6 "We trust that the explanations in paras 14 to 17 of our Financial Despatch, No 269, of the 24th September 1883, will have satisfied your Lordship that the line not only possesses a protective character, but that it is, as above stated, an essential part of the protective system of India, and will be invaluable in carrying the grain of Chhatusgarh and Berar to Central India, Bundelkhand, Rohilkhand, or other parts of north-western India in time of famine. On this point we propose to submit further evidence shortly."

Government of North West Provinces and
Oudh; Letter No 60, W R., dated January
1884

Para 12 "From the foregoing review of the course of proceedings it appears that, during the past three years, the Local Government has not ceased to press upon the Government of India the extreme importance of opening out the Bundelkhand districts by railways, not only because those districts which are land-locked and difficult of access are under periodical risk of famine, but because their production and trade are kept in a backward condition by the want of proper communication, a defect which affects the revenue and the prosperity of the people to a very perceptible degree. And, since these districts lie right across the line of a direct railway thoroughfare between the best and most central districts of the North Western Provinces and the natural out-

lets of commerce, *via* Bhopal to Bombay, the project of running railways through Bundelkhand possesses not only a provincial, but also a general, importance as affecting to a large extent the wheat trade, which has developed so enormously during the last two years."

No. 17.

BILASPUR-ETAWA RAILWAY.

Length.—352 miles.

Gauge.—Broad.

Cost.—Rs 2,45,25,000.

Cost per Mile.—Rs 69,588, inclusive of rolling stock

Direction of the Line.—From Bilaspur on the Nagpur-Burrakar Railway *via* Ratanpur, Pendra, and Sohagpur to Kutm on the East India Railway, and thence *via* Damoh and Sagar to Etawa, the proposed junction of this line with the Bhopal-Jhansi-Cawnpore Railway.

Précis of Correspondence

May 1883.—The Government of India publish in the "Gazette of India" the results of a reconnaissance for a railway between Bilaspur and Sagar, with an extension to the junction on the proposed Bhopal-Jhansi Railway, 352½ miles, 2,45,25,000 rupees.

"Gazette of India," 18th May 1883

June 1883.—The Government of India submit results of preliminary reconnaissance to Secretary of State, and suggest the construction of the line by a company on a limited guarantee

Government of India, Despatch No 83, Railway, dated 2nd June 1883

August 1883.—The Secretary of State forwards a proposal from Lieutenant General C. H. Dickens, proposing to form a company to work the Umaria coal fields on certain conditions.

Secretary of State, Despatch No 110, Railway, dated 23rd August 1883

October 1883.—The Government of India decline General Dickens' proposals, stating they consider this railway so important that it must be made by the State, in default of its being taken up by private enterprise.

Government of India, Despatch No 107, Railway, dated 9th October 1883

October 1883.—The Sardars of the Rewah State agree to give the land required for the railway free of charge, and to allow coal to be worked at a fair royalty to be fixed by the Government of India.

Letter from Political Agent, Bughelkur d, No 1067, dated 10th October 1883

Population of Districts

	Area	Population	Population per Square Mile
Bilaspur - - - - -	7,798	715,398	91
Rewah (Native State) - - -	18,000	2,035,000	156
Jubbulpur or Sohagpur - - -	3,918	528,859	134
Sagar - - - - -	4,005	527,725	131
Damoh - - - - -	2,799	280,642	96

Population of Towns.

Bilaspur - - - - -	4,898
Ratanpur - - - - -	5,111
Pendra - - - - -	2,000
Damoh - - - - -	8,189
Sagar - - - - -	45,655

Advantages of Line, Probable Traffic, &c

Government of India Note on proposed Railway, dated 18th May 1883

"One of the several important objects attained by constructing the proposed railway will be the opening up of Rewah coal fields."

"The line may, in fact, be regarded as essentially a 'mineral' one, in addition to any other advantages it may possess. It will supply coal to the whole of any system of railways in Central India and Bundelkund, to a portion of the future Nagpur-Bengal line, and of the East Indian and Great Indian Peninsula Railways, and probably to the greater portion of the Ryputana State Railway and other lines to the north-west of Agra. In fact, if judiciously worked these collieries will ensure a very heavy traffic over this railway."

"Rice is the bulkiest of the exports from Shohagpore and South Rewah generally, then oilseeds, millets, ghi, and forest produce."

Government of India, Despatch No. 83, Railway, dated the 2nd June 1883

Para. 7 "We may, however, remark, that coal for the supply of other railways is likely to be a very important factor in the receipts, and that the opening of a route from Bilaspur through Rewah is likely to create a large traffic which is now without the means of existence."

Agent to the Governor General for Central India, No. 46, P₁, dated 6th June 1882

Para. 14 "Owing to the want of communication, to the pressure of onerous transit duties, to burdensome taxation, and in some districts to insecurity of life and property, Central India has remained, compared with the rest of India, in a backward condition. There are already signs that this period of apathy and darkness is terminating, and in no way can the advance of Central India be more hastened than by the construction of lines of railway, without cost to the Government, and without perpetual guarantee to Native Princes (a direct incentive to obstruction, and the continuance of transit duties), in such alignment as can be indisputably shown to be most advantageous to commerce, and of such a capacity as to be able to carry the traffic which will, in course of time, assuredly flow to them."

"It would be cruel to interfere with the prospect of a railway to Umadia and thence to Sohagpur. If there be Barakar coal on the Mahanaddi, I should like it to be discovered after the line had been made to the Rewah territory. Stopping short at the Mahanaddi would never pay, but by extending to Pati or Sohagpur the main obstructions to traffic in the rains would be overcome, and the rich black soil country at the foot of the Mandla plateau would be tapped, and the magnificent grain district of the Kalauti (Mandla Balaspur) brought within the range of active commercial enterprise. The rice fields of Kothi Niguan, Khoris, and Chang Bhokar will also have an outlet, and then where will famine be?"

No 18.

WESTERN DECCAN RAILWAY.

Length—242½ miles.

Gauge—Metre.

Cost—Rs 1,80,00,000.

Cost per Mile.—Rs. 74,300

Direction of Line—From Poona on the Great Indian Peninsula Railway, *via* the Bhor Ghat to Jejuri, thence to Miraj, and then crossing the Krishna river at Kurchi, to Belgaum, on the South Mahratta Railway

Prices of Correspondence.

August 1882.—The Government of Bombay proposes that the line should be constructed by the South Mahratta Company, under Section 48 of their contract.

Government of Bombay, Letter No. 14, P., dated 17th August 1882

September 1882.—The Government of India telegraphs to the Secretary of State urging the construction of the line by the South Mahratta Company.

Government of India, Telegram, dated 8th September 1882

September, 1882.—The Government of India forward to the Secretary of State the approximate estimates of the line; 254 miles; 195 lacs of rupees, or 77,000 rupees per mile, and again recommend the construction of line by South Mahratta Company

Government of India; Despatch No 114, Railway, dated 18th September 1882

February 1883.—The Secretary of State states that, owing to unfavourable state of the money market, it was advisable to postpone any attempt to raise the capital for the line

Secretary of State, Despatch No 25, Railway, dated 8th February 1883

February 1883.—The Government of India recommend that negotiations be resumed with the South Mahratta Company for the construction of this railway.

Government of India, Despatch No 15, Railway, dated 27th February 1883

May 1883.—The Government of India suggest the extension of the guarantee to South Mahratta Company, if indispensable, for the construction of this railway, but prefer the Company raising money on debentures at 3½ or 4 per cent.

Government of India, Despatch No. 70, Railway, dated 20th May 1883

June 1883.—The Government of Bombay urges the expediency of commencing on the tunnels and other heavy works on the Western Deccan Railway.

Government of Bombay, Despatch No. 11, Railway, dated 26th June 1883.

July 1883.—The Government of India, commenting on the proposals of the Government of Bombay, again point out the expediency of arranging terms with the South Mahratta Company.

Government of India Despatch No 108, Railway, dated 14th July 1883

September 1883.—The Government of India report progress in the location of the line, and again urge the expediency of arranging terms with South Mahratta Company, and of commencing at once on the tunnels and other heavy works, so as not to lose the working season of 1883-84.

Government of India; Despatch No 150, Railway, dated 15th September 1883

September 1883.—The Government of Bombay offer to advance 10 lacs from Provincial balances, in order to commence work

Government of Bombay, Despatch No. 16, dated 18th September 1883.

September 1883.—The Secretary of State telegraphs that negotiations with South Mahratta Company were still in progress.

Secretary of State, Telegram, dated 26th September 1883

October 1883.—The Secretary of State telegraphs that the South Mahratta Company will probably be able to raise the capital required, if the Indian Government will advance money temporarily, and if 4 per cent. guarantee is extended to June 1889.

Secretary of State, Telegram, dated 12th October 1883

October 1883.—The Government of India offer to advance 20 lacs for urgent works, but deprecate any modification of existing contract if it can be avoided.

Government of India, Telegram, dated 24th October 1883.

November 1883.—The Secretary of State reports that terms have been settled with South Mahratta Company for the construction of the line, and that the Company will commence work at once.

Secretary of State, Telegram, dated 29th November 1883

December 1883.—The Secretary of State explains that the Company has accepted the construction of the line on the condition that the 4 per cent. guarantee was to be extended to 1st June 1889, both on the present capital of 3,000,000 £ and on the further capital required of 2,000,000 £

Secretary of State, Despatch No 162, B, dated 13th December 1883.

Population of Districts.

	Area.	Population.	Population per Square Mile
Poona - - - - -	5,099	907,235	177
Satara - - - - -	5,378	1,116,050	207
Belgaum - - - - -	4,591	938,750	204
Khelaspur (Native State) - -	3,184	802,691	252
Miraj (Native State) - - -	340	82,201	241

Population of Towns

Poona - - - - -	90,436
Satara - - - - -	24,484
Miraj - - - - -	22,520
Belgaum - - - - -	32,277

Advantages of Line, Probable Traffic, &c

Government of India, Despatch No 114,
Railway, dated 16th September 1882

“ This line will probably draw a fair traffic from the first, but owing to its initial high cost it may not for some years be commercially a success if not assisted in some way by Government, or by the several Native States whose territories will be benefited ”

Secretary of State, Despatch No 162,
Railway, dated 13th December 1883

“ I had less hesitation in making it, as, under the assurance given by your Excellency that the line could be completed before 1887, and that it was the most remunerative portion of the system, I felt that very little risk would be incurred of increasing the charge upon the revenue of the country ”

No 19

BANKAPUR-HARIHAR RAILWAY.

Length—50 miles

Gauge—Metre

Cost—Rs 30,00,000.

Cost per Mile—Rs 60,000

Direction of Line—The line is intended to connect the South Mahratta system with the Mysore State Railways. The project of the line is not yet complete.

Population of Districts.

	Area	Population	Population per Square Mile.
Dharwar - - - - -	4,565	988,037	217
Chitaldrug - - - - -	4,471	531,360	118

Population of Towns

Hubli - - - - -	37,961
Harihar - - - - -	6,401

Advantages of Line, Probable Traffic, &c.

Para 7 "I am to add that his Excellency in Council is entirely in favour of extending the line from Hubli to the Mysore frontier. The Agent, it is understood, is in communication with the Mysore Railway Administration, with a view to settling the point of junction with the Mysore system."

Government of Bombay, Letter No 794,
dated 8th May 1883

"This line, which is to meet at Harihar, or some other suitable point, the Mysore Railway now in progress from Bangalore, as far as Tumkur, is one of the extensions provided in the contract with the Southern Mahratta Railway Company, as to be made by them on requisition. Its protective value to the British district of Dharwar will be considerable, but to the Mysore State simply incalculable, as opening western access for grain from the sea in time of famine. Had this line existed in 1877-78, the mortality which occurred in Mysore would have been impossible. As it will convey cotton and other exports, besides imports of all kinds, it promises to be fairly remunerative. Its importance is pointed out by the Famine Commission."

Government of India, Despatch No 29 of
1883, dated 23rd January

No 20.

THE WAZIRABAD-SIALKOT RAILWAY

Length.—25½ miles.

Gauge—Broad

Cost—Rs. 9,50,000.

Cost per Mile—Rs. 37,200

Direction of Line—The line is a branch to the Punjab Northern Railway, connecting Wazirabad, a station on that railway, with Sialkot, a large military station near the frontier of Cashmere.

Précis of Correspondence

This line was sanctioned by the Secretary of State in Despatch No 83, Railway, dated 14th June 1883. It was opened on the 7th January 1884

Population of Districts.

	Area.	Population.	Population per Square Mile
Sialkot - - - -	1,955	1,005,004	510
Guzranwala - - - -	2,563	550,576	207

Population of Towns

Wazirabad - - - -	15,730
Sialkot - - - -	25,337

No 21.

AMRITSAR-PATANKOT

Length.—65 miles

Gauge.—Broad.

Cost.—Rs 60,00,000.

Cost per Mile.—Rs. 92,300.

Direction of Line—This branch line starts from Amritsar, a station on the Sind, Punjab, and Delhi Railway, and proceeds *via* Gurdaspur to Pathankot, at the foot of the Himalayas.

Précis of Correspondence

This line was sanctioned by the Secretary of State on the 6th December 1881, and one section from Amritsar to Dinanagar was opened on the 1st January 1884.

Population of Districts.

	Area.	Population.	Persons per Square Mile
Amritsar District - - - -	1,555	832,750	535
Gurdaspur - - - - -	1,818	906,126	496

Population of Towns.

Amritsar - - - - -	136,609
Goordaspur - - - - -	4,137
Pathankot - - - - -	5,011

No. 22

BEZWADA TO NIZAM'S FRONTIER

Length—32 miles

Gauge—Broad.

Cost.—Rs. 25,60,000.

Cost per Mile—Rs 80,000

Direction of Line—The line starts from Bezwada, the present terminus of the Bellary-Kistna Railway, and effects a junction with the branch line of the Nizam's system of railways from Warangal.

Population of District.

	Area.	Population.	Persons per Square Mile
Kistna - - - - -	8,036	1,452,374	180

Population of Town.

Bezwada - - - - -	8,026
-------------------	-------

Advantages of Line, Probable Traffic, &c

"His Excellency the Governor in Council attaches great importance to the early construction of a line of light railway to connect Bezwada with the Singareni coalfields"

Government of Madras, Letter No. 805, Railway, dated 16th December 1882.

"4 The extent to which the railways in the south of India have suffered from the absence of any available source from which supplies of Indian coal could be drawn, is well known to the Government of India, and his Excellency the Governor in Council feels it needless to offer a remark on the advantages which must result from the construction of a line of railway by which coal could be cheaply conveyed from the nearest suitable field yet discovered to a point whence it can be sent to Madras by canal."

"3. I am directed to bring once more before the attention of his Excellency the Governor General in Council the extreme importance which this Government attach to the connection of the Singareni coal field with Bezwada, and to express the hope that arrangements may be made for the survey of the whole of the short line from Singareni to Bezwada, not of the section only between Bezwada and his Highness's frontier

Government of Madras, No. 867, Railway, dated 6th September 1883

"4 The advantages which must result from the construction of this short line (some 80 miles only in length) have been already so fully set forth, that it seems to His Excellency in Council unnecessary to dwell on them again"

No. 23

WARORA-CHANDA RAILWAY.

Length—35 miles

Gauge—Broad.

Cost.—Rs. 35,00,000.

Cost per Mile—Rs 1,00,000.

Direction of Line.—The line is to start from Warora, the present terminus of the Wardha State Railway, *vid* Chanda to the Nizam's frontier, to effect a junction with the proposed extension of the Nizam's State Railway.

Prices of Correspondence.

October 1882.—The Government of India requests the Chief Commissioner, Central Provinces, to put in hand a survey for an extension of the Wardha State Railway to Chanda and to the frontier of the Hyderabad territory, in order that a connection may be made with the proposed extension of the Nizam's State Railway from Hyderabad *vid* Warangul to the British frontier near Chanda.

Government of India, Letter No 838, R.C. dated 27th October 1882.

October 1883—The Chief Commissioner, Central Provinces, submits estimate of line amounting to 38,80,000 rupees.

Chief Commissioner, Central Provinces, Letter No. 5924, dated 15th October 1883

October 1883—The Government of India orders a detailed survey to be made on the direct line, with a branch to Durgapur

Government of India, Letter No 862, R.C., dated 26th October 1883

[The project is yet incomplete.]

Population of Districts.

	Area	Population.	Population per Square Mile.
Chanda - - - - -	9,700	534,481	55
Wardha - - - - -	2,401	354,720	149

Population of Towns.

Wardha - - - - -	2,734
Bhandok - - - - -	2,575
Chanda - - - - -	17,228

Advantages of Line, Probable Traffic, &c.

Government of India, Letter No 988, E C, dated 27th October 1882

The line will directly benefit the iron industry that may, at no very distant date, be started at Durgapur.

Chief Commissioner of the Central Provinces, Letter No 4878, dated 21st August 1883.

Para. 21. "On the favourable estimate taken, it will be observed that the profits are not expected to realise more than 2½ per cent. In these figures the entire cost of the Wardha bridge has been debited to the small section under estimate; but assuming that the cost of the Wardha bridge is borne in equal proportions by the British and Hyderabad Governments, and that half the cost of the bridge is spread over the entire length of the Wardha Coal State Railway, a higher rate of profits than 3 or 3½ per cent. should not be looked for"

Director of Agriculture and Commerce, Central Provinces, Note, dated 29th September 1883

"The strip of railway will lie for its whole length within the Warora tahsil of the Chanda District, the three parganas of which (Warora, Bhandak, and Haweli) it will successively intersect

"The tahsil is one of very low productiveness. Its total area is 819,840 acres, of which only 266,880 acres (or 33 per cent) are cultivated. The percentage of cultivated to total area in the most fertile portions of the province lies between 50 and 65 per cent., and the Warora tahsil has but little more than half the proportion of cultivation which is possessed by the Wardha district. Its population is as thin as 106 to the square mile

"Of its three parganas, the northernmost, Warora, is by far the most fertile, possessing 45 per cent of cultivation. The centre pargana (Bhandak) has only 20, and the southern (Haweli) only 17 per cent

"The agricultural production of the tahsil is not in any way specialised except in respect to cotton, which is grown in rather more than the ordinary proportion, and of which therefore a surplus is produced for export. The percentage area under the principal crops in each pargana at settlement is shown below —

	Warora Pargana	Bhandak Pargana.	Haweli Pargana.
Cotton - - - - -	18	20	19
Wheat - - - - -	19	13	7
Juar - - - - -	30	40	46
Rice - - - - -	2	10	8
Oilseeds - - - - -	13	9	8

"Except in regard to cotton, local production conforms to local consumption, and does but little more than supply it. And I understand that the export of cotton from this tahsil is much smaller than that of the Berar district of Wun on the opposite side of the Wardha river."

"There are only two towns which possess the slightest claim to importance,—Bhandak, with a population of 2,575, and Chanda, with a population of 16,137. Both are decayed places, but at both are held fairs of some little commercial interest."

"Under present circumstances, this tract may be pronounced to be almost entirely deficient in trade resources."

"I venture to add that I consider it of great importance that the railway should be taken as near Bhandak as possible (if the Kauri be adopted), and that its Chanda station should be placed close to the city, and not merely at no great distance from it. The present commercial importance of both places is, as noted above, comparatively trifling, but it may be expected to increase considerably on the opening of a railway. The grain which has annually to be imported for the consumption of Chanda is about 112,000 maunds, and if this could be secured, it would amount to an important item in the traffic of so unpromising a line. The mere opening of a line of railway does not alter the relationship between the bannas of a market town and the cultivators who supply them. New markets do not spring up very rapidly, and traffic often continues to flow in its old channel for years, irrespective of the fact that the opening of a line of rail has rendered some other channel much more suitable. I have come across not a few instances of this. Supposing, therefore, that Bhandak and Chanda continued to be the principal marts of this tract, it is most important that the line should pass as near them as possible. There are few things which hamper trade more than the necessity for short cartages, and it is often more profitable to cart grain 45 miles from Lucknow to Cawnpore than to send it by rail with a three or four miles cartage at each end of its journey."

No. 24

PROME-ALLANMYO RAILWAY.

Length—42 miles.

Gauge—Metre.

Cost—Rs 37,50,000.

Cost per Mile.—Rs 89,280

Direction of Line.—This is simply an extension of the present Rangoon-Prome Railway to the frontier at Allanmyo, opposite to the European station of Thayetmyo.

Prices of Correspondence.

January 1881.—The Government of India proposes to the Secretary of State the extension of the Rangoon-Prome Railway to Allanmyo.

Government of India, Despatch No 3, Railway, dated 12th January 1881

April 1881.—The Secretary of State offers no objection to the commencement of the line as a provincial undertaking

Secretary of State, Despatch No 61, Railway, dated 28th April 1881.

Population of Districts.

	Area.	Population.	Persons per Square Mile.
Prome-	2,887	274,873	95
Thayet	2,397	156,816	65

Population of Towns.

Prome - - - - -	26,826
Thayetmyo - - - - -	10,170
Allanmyo - - - - -	9,697

Government of India, Despatch No 3, Railway, dated 12th January 1881

Para. 3 "So impressed is the present Chief Commissioner with the value of railways in his province, that it is not improbable he will proceed, out of provincial funds, to extend the Rangoon-Prome Railway to the frontier at Allanmyo, opposite to the European military station of Thayetmyo. The cost of this extension of 42 miles, which has been surveyed and carefully laid out, is estimated at 37½ lacs, and we have to ask your Lordship's sanction to the work being carried out as a provincial undertaking"

Secretary of State, Despatch No 61, Railway, dated the 28th April 1881

Para. 5 "The additional proposal by the Chief Commissioner of Burmah for extending the Rangoon-Prome Railway to the frontier of Allanmyo also receives your support. The length of this line is 42 miles, and the estimated cost 37½ lacs, which it is proposed to meet out of provincial funds. Its chief recommendation is the political and military advantages which it will secure. It will at once bring the frontier military station of Thayetmyo into railway communication with Rangoon, and it will serve the purposes of trade by intercepting the river traffic at Allanmyo. I offer no objection to the commencement of the line"

No 25.

RANGOON-TONGOO (SITTANG VALLEY) RAILWAY.

Length.—163 miles.

Gauge—Metre

Cost—Rs 1,17,00,000

Cost per Mile.—Rs. 71,770

Direction of Line.—The line connects Rangoon, the capital of British Burmah, with Tounghoo, an important military station on an exposed frontier, passing through the towns of Pegu, Pya-gee, and Kadot.

Précis of Correspondence

Government of India, Despatch No 128, Railway, dated 7th September 1880

September 1880—The Government of India propose the construction of this line amongst others

Government of India; Despatch No 3, Railway, dated 12th January 1881

January 1881—The Government of India again request the sanction of the Secretary of State to the construction of the Rangoon-Tounghoo Railway

Secretary of State, Despatch No 14, Railway, dated 27th January 1881

January 1881—The Secretary of State approves of the project.

Secretary of State, Telegram, dated 21st May 1881. Also, Despatch No 88, Railway, dated 30th June 1881

May 1881.—The Secretary of State sanctions the line

May 1881.—The construction of line ordered.

Population of Districts.

	Area.	Population.	Persons per Square Mile
Toung-ngú - - - - -	6,254	86,166	14
Shwegeng - - - - -	5,565	129,485	23
Rangoon - - - - -	5,691	431,068	76

Population of Towns.

Toung-ngú	-	-	-	-	-	12,414
Rangoon	-	-	-	-	-	98,745
Pega	-	-	-	-	-	4,948
Kyauk-Hto	-	-	-	-	-	2,074
Sweyeng	-	-	-	-	-	7,528

Advantages of Line, Probable Traffic, &c

"About Toungoo much land is not cultivated, simply because there is no market for the produce. The town in the dry season is, by the absence of roads and water communication, cut off from the rest of the world. Wheat, paddy, and vegetables of all kinds can be grown.

"Beyond Toungoo the country in British Burmah, and the Karennee and Shan States have been fully described by Colonel Twynam. The trade with these districts is bound to increase with an outlet like the Sittang Valley Railway.

"Thousands of Shans and Karennees already find their way to Rangoon yearly, with their packs on their shoulders or with pack oxen.

"The merchandise that they dispose of is inconsiderable, but, with the proposed improved communication with the great market of Rangoon, a large and healthy up and down traffic for the railway may be expected."

Para 2 "In Burmah we have asked for your Lordship's permission to take in hand, as a productive public work, the railway from Rangoon to Toungoo, and we have set aside a sum of 30 lacs from the assignment for such works in 1881-82, in anticipation of your Lordship's sanction, in the hope of ensuring rapid progress. The great financial success of the Rangoon-Prome Railway (a success almost unprecedented in railway construction in India) has demonstrated that railways in Burmah will, on account of the enterprising character of the people, and the great undeveloped wealth of the country, not only give large indirect returns in land, customs, and forest revenue, but will pay, within a very short period after being opened to traffic, a fair percentage of net income on their capital cost. Apart from its remunerative character, this line from Rangoon to Toungoo has special recommendations, as connecting an important military station on an exposed frontier with the capital of the province. At present, under the most favourable circumstances, the journey from Rangoon to Toungoo cannot be accomplished under a fortnight."

Engineer in Chief of the Rangoon and Irrawaddy Valley State Railway
Report, dated October 1879

Government of India, Despatch No 3,
Railway, dated 12th January 1881

Para 5 "In the second class you include the Rangoon and Toungoo Railway, which you state is considered by the civil authorities in British Burmah, as well as by the commercial community in Rangoon, to be essential to the progress and development of the province. A further recommendation stated by you is, that, besides serving commercial purposes, it will establish an important political and military communication, and is an undertaking which has been placed by the Army Commission in the front rank of those required for the improvement of the defences of the empire. Its construction now would also, you state, supersede the necessity for spending a large sum of money on the existing road. The length of the line is 164 miles, and its estimated cost 1,169,827 $\frac{1}{2}$, or 7,133 $\frac{1}{2}$ l. per mile."

Secretary of State, Despatch No 14, Railway, dated 27th January 1881

Para. 4 "With regard to the Rangoon-Toungoo project, for which you have set aside a sum of 30 lacs from the productive public work assignment in 1881-82, in anticipation of my sanction, I have to refer you to my Railway Despatch, dated 27th January, No 14, in which I expressed a favourable opinion on the scheme, and stated my readiness to sanction it as a productive public work on your showing that the conditions laid down in my Financial Despatch, No 1, of 6th January last, would, as seemed probable, be fulfilled."

Secretary of State, Despatch No, 61,
Railway, dated 28th April 1881

Para. 4.

Chief Commissioner, British Burma, Letter
No 3097, dated 5th May 1881

Para 4 "The case of the Toungoo Railway is somewhat special, it is primarily a military line, which will connect an exposed frontier garrison with the seaboard, it will open up a landlocked country which has infinite capabilities, but is at present thinly peopled; it will share the same workshops, the same supervising staff, and the same rolling stock with the Irrawaddy Valley. This latter line already earns a net income of more than 4½ per cent. on its cost, though it has been open only four years; it requires a further moderate outlay for about five years before it can be considered to be in full and safe working order. Feeder roads and cross roads to the Irrawaddy Valley Line are being opened out, and the scheme of these roads now in hand can hardly be completed before the end of the year 1883. By that time, at the present rate of progress, and if the supply of rolling-stock is kept up, the line ought to be earning 7½ or 8 per cent net income. The railway is a provincial railway, it is managed as economically as possible, without any charges for English or Indian directorates, the fares and rates of freight are kept low, so as to encourage traffic, and so as to confer the greatest possible benefit to the country. The circumstance that the Toungoo line is linked with and will be worked with the Irrawaddy line, and that the surplus of the older line will make up for the deficit earnings in the younger line, make it undesirable to separate the two lines and place them under separate management."

Secretary of State, Despatch No 88,
Railway, dated 30th June 1881

Para. 3 "The circumstances of the case are, you observe, such as to 'render it almost impossible to make any 'exact or detailed calculation of the receipts to be anticipated.' You have accordingly relied on the opinions of the present Chief Commissioner and the late Chief Engineer of British Burmah, whose knowledge and experience, no doubt, qualify them to guide you in the matter."

No. 26

BAREILLY-PHILIBHIT RAILWAY

Length — 32½ miles.

Gauge — Metric

Cost.—Rs 17,50,000

Cost per Mile — Rs 53,850.

Direction of Line — The line proceeds from Bareilly to the right bank of the Deoha river opposite Philibhit. The point of junction with the Rohilkund-Railway will be at Bhojupura, 12 miles from Bareilly.

Précis of Correspondence.

Secretary of State, Despatch No 141,
Railway, dated 15th November 1883.

November 1883 — The Secretary of State sanctions the construction of the line as a productive public work.

Population of Districts.

	Area.	Population	Persons per Square Mile
Bareilly - - - - -	2,982	1,507,139	505

Population of Towns.

Bareilly	-	-	-	-	-	-	102,982
Philibhit	-	-	-	-	-	-	29,840

"These show that at least a traffic of 90 to 100 tons of goods may be relied on daily, besides a considerable passenger traffic."

Government North West Provinces and Oudh, Letter No 1357, W. R., dated 1st August 1883.

"Philibhit, moreover, has always been a considerable mart for the export of timber, and of all kinds of produce, also for the trade with Nepal and Kumaon, and, knowing how railways stimulate and develop traffic, Sir Alfred Lyall considers that good grounds exist for believing that the railway will prove a paying concern."

Para 2 "It will be observed that the line is estimated to return upwards of 4 per cent on its capital cost immediately on completion, and better results may shortly be expected from the development of traffic."

Government of India, Despatch No 141, Railway, dated 8th September 1883

Para. 8 . . . "This Government is most desirous to undertake as early as possible the construction of the whole line between Bareilly and Philibhit, the prospects of traffic on which appear exceptionally good."

Government of North West Provinces and Oudh, Letter No C 145, Railway, dated 17th September 1880.

Para 3. "A considerable trade in timber may be anticipated, and the construction of the railway cannot fail to increase largely the exports of grain, and probably also sugar, of which an average export of 19 tons a day is shown in the return. The return salt trade is probably capable of development, and doubtless the import of miscellaneous goods would rapidly increase."

Note by W C Furnival, Esq., Joint Secretary, Railway Branch, dated

Detailed trade statistics are given in letter from North-Western Government, No. 1357, W. R., dated 1st August 1883.

No 27

FARUKHABAD-HATTRAS, including Kashgung-Soron Branch, with Bridge over the Jumna at Muttra.

Length—112 miles

Gauge—Metre.

Cost—Rs. 56,10,000.

Direction of Line—The bridge over the Jumna at Muttra will connect the two sections of the Achnera-Hattras railway, hitherto separated by the Jumna river. The Farakabad-Hattras line constitutes the missing link in the through line between Cawnpore and Achnera. It is carried *viâ* Kashgung, whence a short branch of eight miles leads to Soron, a place of pilgrimage on the river Ganges.

Précis of Correspondence

July 1882—The Secretary of State sanctions the extension of the Cawnpore-Farakabad Railway to Hattras Road, 103 miles, 45,00,000 rupees.

Secretary of State, Telegram, dated 4th July 1882, also Despatch No 92, Railway, dated 6th July 1882

September

Secretary of State, Despatch No 126,
Railway, dated 21st September 1882

September 1882.—The Secretary of State sanctions the estimate, amounting to 8,76,340 rupees, of the cost of constructing a metre-gauge railway bridge over the Jumna to connect the Muttra-Hathras and Achnera Railways.

June 1883.—The Secretary of State confirms the sanction accorded by the Government of India to the construction of a branch line from Kashganj to Soron, eight miles long, at an estimated cost of 2,50,000 rupees

Population of Districts

	Area.	Population.	Persons per Square Mile.
Farrukhábád - - - -	1,744	918,860	527
Aligárah - - - - -	1,964	1,078,333	547
Hath - - - - -	1,512	708,527	465

Population of Towns.

Farruckhábád - - - -	79,204
Sikandra Ráo - - - - -	12,642
Háthras - - - - -	23,589
Soron - - - - -	11,182
Káshganj - - - - -	15,764

No 28.

DACCA-MYMENSING RAILWAY.

Length—85 miles.

Gauge—

Cost.—Rs 60,00,000

Cost per Mile.—Rs. 70,600

Direction of Line—The railway starts from Dacca and proceeds *via* Kathal to Mymensing.

Précis of Correspondence.

Government of India, Despatch No 3,
Railway, dated 12th January 1881

January 1881.—The Government of India recommend to the Secretary of State the construction of a line from Dacca to Mymensing

Government of Bengal, Letter No 2707,
Railway, dated 5th September 1881

September 1881.—The Bengal Chamber of Commerce memorialize on the subject of railway communication with Assam

Government of India, Despatch No 55,
Railway, dated 23rd May 1882.

May 1882.—The Government of India deprecate further delay, and request sanction to proceed with the line

Secretary of State, Telegram, dated 9th
August 1882

August 1882.—The Secretary of State sanctions the construction of the line, 85 miles, 59,62,742 rupees.

Population of Districts.

	Area	Population.	Persons per Square Mils.
Dacca - - - - -	2,798	1,862,993	640
Maimansing - - - - -	6,209	2,349,917	373

Towns

Dacca - - - - -	69,212
Maimansing or Nasirabad - - - - -	10,068

Advantages of Line, Probable Traffic, &c

Para 112 "The chief exports of the districts through which the line will pass are jute, rice, hides, and seeds, cereals, cotton, timber, and charcoal are also exported in larger quantities. The imports are chiefly in piece-goods, salt, tobacco, and sugar; hides are also imported from Calcutta and again exported as Dacca hides. Attached are tables of imports and exports during the year 1876-77, compiled from the 'Statistical Reporter'."

Government of Bengal, Despatch No 852,
S R., dated 26th October 1886.

Para 117 "Of the Mymensing districts I could only ascertain the actual exports of six months from the town of Naserabad, which were rice and paddy 12,28,000 maunds, jute 34,000 maunds, sugar 20,000 maunds, seed 70,000 maunds. This does not, therefore, by any means show the trade of the district, the export of jute alone from Boyrab bazaar is over six lacs of maunds."

"Judging from the population and richness of the districts served by the proposed railway, I recommend its construction as one that will certainly, after being open for a year or two, yield full interest in the capital required to construct it, besides conferring very great and important indirect benefits on those districts."

Officiating Director of State Railways,
North Eastern system, Note No 8, dated
7th May 1883

"Great importance is also attached to the improvement of communication with the districts named in connection with the labour questions. The great want of the Assam Province is, without doubt, cheap and abundant labour as well as cheap food, and any scheme which will facilitate the transfer of the surplus population of Bengal and Behar to Assam and Cachar must greatly add to the material prosperity of the latter districts."

Government of Bengal; Letter No 2707,
Railway, dated 5th September 1881.

"It will also prove of great public advantage that the coal, limestone, and timber known to exist along the route of the proposed railway, and at present unutilized for want of means of access, should be made available. The opening out of the valuable coalfields referred to, while affording the cheap fuel necessary to reduce to the utmost the cost of working the proposed line, will also benefit other railways, steamers, and manufacturing industries in Bengal requiring steam power. This and the proximity to the line of other minerals and natural products in the Garo and Khasia hills, together with the heavy local traffic which may be looked for in the prosperous and densely populated districts of Dacca and Mymensingh, should go far to ensure the financial success of the proposed railway."

Para 2.

Government of India, No 55, Railway,
dated 23rd May 1882

Para 2 "We believe that this line, independently of any extension, will prove a very remunerative undertaking, and we consider that its construction should be, without further delay, commenced as a State Railway."

Complete traffic statistics accompanying letter from Government of Bengal, No 852, S. R., dated 26th October 1880.

No 29

RANAGHAT-SANTIPUR-BHAGWANGOLA.

Length—62 miles.

Gauge—Broad

Cost—Rs. 81,00,000.

Cost per Mile—Rs 88,040

Direction of Line—From Ranaghat, a station on the Bengal Central and the Eastern Bengal Railways, to Santipur, on the Hugh, and thence *via* Kisanaghur, Barhampur, and Murshidabad, to Bhugwangola, on the Ganges.

Precis of Correspondence

Bengal Central Railway Company; Letter No 0615, dated 2nd August 1882

August 1882—The Bengal Central Railway Company propose to make this railway on the same terms as their main line

Secretary of State, Despatch No 116, Railway, dated 31st August 1882

August 1882—The Secretary of State forwards these proposals for the views of the Government of India.

Secretary of State, Telegram, dated 8th November 1882

November 1882—The Secretary of State telegraphs that no terms can be settled with Company, and authorises the Government of India to proceed with the line from State funds

Government of India, Letter No 1048, R O, dated 11th December 1882

December 1882—The Government of India instruct the Government of Bengal to acquire the land, and begin on the earthwork.

Secretary of State; Despatch No 26, Railway, dated 16th February 1883

February 1883—The Secretary of State again reports the failure of the Central Bengal Railway Company to undertake the line.

Government of India, Letter No 168, R.C., dated 21st February 1883.

February 1883—The Government of India request the Government of Bengal to contract expenditure on line.

Government of Bengal, Letter No 4185, dated 6th March 1883.

March 1883—Expresses the disappointment of the Lieutenant Governor, and of the people of the Nuddea and Murshidabad, at the line being temporarily stopped.

Secretary of State, Despatch No. 93, Railway, dated 19th July 1883.

July 1883—The Secretary of State asks the Government of India what course should be pursued in respect to this line, in the event of the Central Bengal Railway Company being unable at end of year to undertake the work.

Government of India, No 131, Railway, dated 18th August 1883.

August 1883—The Government of India reply that the prosecution of the line must be deferred for some time to come.

Population of Districts.

	Area.	Population.	Persons per Square Mile.
Moorshedabad - - - -	2,462	1,353,626	535
Nadya or Nuddea - - - -	3,431	1,812,795	530

Population of Towns.

Murahidabad - - - - -	46,182
Berhampur - - - - -	27,110
Krishnagar - - - - -	26,750
Santipur - - - - -	28,635
Nuddea - - - - -	8,863

APPENDIX A

SCHEDULES of LINES specifically sanctioned by Secretary of State

	Line	Mileage	Cost.	REMARKS
1	Rewari Ferozpur - - -	302	£ 483,608	Revised estimate sanctioned by Secretary of State in Despatch No 92, R., dated 10th July 1883 Construction of section from Rewari to Hissar was ordered on the 13th September 1881, and that of section from Hissar to Ferozpur on 8th October 1882. The section from Rewari to Hissar was opened in August 1882, and that from Hissar to Sirsa in January 1884
2	Jbana-Manikpur - - -	180	1,273,378	Estimate on metre gauge sanctioned by Secretary of State by Despatch No 140, R., dated 8th November 1883 Construction sanctioned on 23rd August 1883
4	Bellary Kistna - - -	265	1,620,404	Sanctioned by Secretary of State in Despatch No 120, dated 4th October 1883 Construction sanctioned on 26th September 1883
6	Cuddapah-Nellore - - -	66	386,400	Sanctioned by Secretary of State in Despatch No 143, R., dated 15th November 1883 Construction sanctioned on 15th November 1883
10	Mozufferpur-Haypore - - -	34	114,119	Sanctioned by Telegram from Secretary of State on the 6th February 1883. Construction sanctioned on same date
11	Sonepur-Haypore - - -	24	142,000	Sanctioned by Secretary of State in Despatch No 126, R., dated 18th October 1883 Construction sanctioned on 19th October 1883
12	Jhijanjpur-Dinagpur - - -	122	795,117	Sanctioned by Secretary of State in Despatch No 126, R., dated 18th October 1883 Construction sanctioned on 19th October 1883
13	Munhali Branch - - -			
18	Western Deccan - - -	242½	1,800,000	Arrangement concluded by Secretary of State with South Maharashtra Company for construction of this line vide Despatch No 44, R.A., dated 30th January 1884
20	Wazirabad Sialkot - - -	25½	20,000	Sanctioned by Secretary of State in Despatch No 83, R., dated 14th June 1883 Construction ordered 19th April 1883 Opened on 1st January 1884
21	Amritsar Pathankot - - -	65	129,576	Sanctioned by Secretary of State by Telegraph on 6th December 1881 Construction sanctioned same date Section from Amritsar to Dimsnagar opened on 1st January 1884
25	Rangoon-Toungoo - - -	163	195,407	Sanctioned by Secretary of State in Despatch No. 88, R., dated 20th June 1881 Construction sanctioned on 23rd July 1881
26	Bareilly Pilibhit - - -	32½	63,633	Sanctioned by Secretary of State in Despatch No 141, R., dated 15th November 1883 Construction ordered on 17th March 1882, and 24th February 1883
27	Ferakhalad-Hatrasa, including Kasbunj Soron Branch and Jumna Bridge.	112	48,450	Kasbunj-Soron branch was sanctioned by Secretary of State in Despatch No 81, R., dated 7th June 1883 Construction ordered 16th March 1883 Jumna Bridge sanctioned by Secretary of State in Despatch No. 126, R., dated 21st September 1882 Construction ordered July 1883.
28	Dacca-Mymensingh - - -	85	3,29,585	Sanctioned by Secretary of State on 9th August 1882
29	Ranaghat Santipore-Bhagwan-gola	92	790,000	Construction sanctioned by Secretary of State on 8th November 1882
	TOTAL - - -	£	8,141,667	

APPENDIX B.

SCHEDULE of LINES approved by Secretary of State.

No.	Line.	Mileage.	Cost.	REFERENCE.
5	Hindupur extension of Bellary-Kistna Railway	115	£ 700,000	"I trust that no considerable delay will arise in carrying out the extension to Anantapur and Hindupur, the importance of which appears to me beyond question"—Extract from Despatch from Secretary of State, No 120, dated 4th October 1883
7	Cuddapah Nellore-Kadiri extension	180	850,000	"The construction of this line is recommended on the ground that it can also be extended at some future date to those portions of the Cuddapah district which suffered most during the famine of 1876-78"—Extract from Despatch from Secretary of State, No 143, R., dated 15th November 1883.

APPENDIX B.—SCHEDULE OF LINES approved by Secretary of State—continued

No	Line.	Mileage.	Cost.	REFERENCE.
12	Jhngarpur-Dinagepur	84½	£ 569,883	"The connection of the whole series, so as to afford the means of communication from west to east, is an object, no doubt, worth securing, as it seems to be compatible with an arrangement of the lines well suited for meeting the general requirements of the probable traffic of the districts.—Extracts from Despatch from Secretary of State, No 196, R., dated 18th October 1885. The projects for the sections of this line from Gungaria to Purneah and from Kaunia-Dubri are not yet sufficiently complete to submit to the Secretary of State for sanction.
14	Kaunia-Dubri - -	54	560,000	
16	Bhopal Jhansi Gwalior and Jhansi Cawnpore.	385	3,500,000	"It may be inferred from the negotiations carried on between the Secretary of State and the Great Indian Peninsula Company, that the Secretary of State, apart from all questions of Agency, &c., approves of the project generally, as a desirable line of railway
19	Bankapur-Hurbar - - -	50	300,000	This line is one of the extensions to the South Mahratta Railway mentioned in Clause 48 of the contract concluded by the Secretary of State with that Company
22	Beowada to Nizam's Frontier -	33	255,000	The Secretary of State having approved of the extension of the Nizam's Railway, it may fairly be inferred that he did not intend that the branches of the Nizam's Railway should stop amaleasy at the Nizam's frontier, but that they should be connected with the existing systems of railway
23	Warora-Chanda - - - -	34	350,000	
24	Prome-Alannyo - - - -	42	375,000	"I offer no objection to the commencement of the line."—Extract from Despatch from Secretary of State, No 61, R., dated 28th April 1881
	TOTAL - - - -		£ 7,460,883	

APPENDIX C.

SCHEDULE OF LINES, not yet sanctioned, nor approved by Secretary of State.

No	Line.	Mileage	Cost	REFERENCE.
2	Jhansi-Manikpur - - - -	-	£ 270,000	The difference between 1,700,000 L., the cost of this line on the broad gauge, and 1,450,000 L., the cost on the metre gauge, has not yet been sanctioned
3	Visagapatam-Rapur - - -	360	2,900,000	The estimates for this line have not yet been submitted to the Secretary of State
8	Damarcheria-Vellore, Arm-Velloppuram	140	840,000	The surveys and estimates of these lines are not yet ready for submission to Secretary of State
9	Minor Pannas Lines - - -	150	900,000	
15	Barakur Nagpur - - - -	827	5,300,000	The construction of this line does not appear to have ever been definitely approved by the Secretary of State, but I gather from para. 4 of the Secretary of State's Despatch, No 133, R., dated 31st October 1883, that the Secretary of State does not disapprove of the project.
17	Bilaspur-Bitawa - - - -	352	2,450,000	This project is under consideration by Secretary of State. Vide Despatch No 110, R., dated 23rd August 1883
	TOTAL - - - -		£ 12,660,000	

I N D E X

TO THE

R E P O R T

FROM THE

S E L E C T C O M M I T T E E

EAST INDIA RAILWAY COMMUNICATION.

Ordered, by The House of Commons, to be Printed,
18 July 1884

LONDON
PRINTED BY HENRY HANSARD AND SON,
PRINTERS TO THE HOUSE OF COMMONS

May be purchased, either directly or through any Bookseller, from any of the following Agents, viz.,
Messrs HANSARD, 15, CROWN COURT, LONDON, W.C., and 32, ABINGDON-STREET, WESTMINSTER;
Messrs FARRY and SON, 15, WOODS, LAST HARLING-STREET, FLEET-STREET, and
Sole Office, House of Lords,
Messrs ADAM and CHARLES BLACK, of Edinburgh,
Messrs ALEXANDER THOM and Co., or Messrs HODGES, FIGGIS, and Co., of Dublin.

I N D E X.

ANALYSIS OF INDEX.

LIST of the PRINCIPAL HEADINGS in the following INDEX, with the Pages at which they may be found.

	PAGE		PAGE
ACCOUNTS:	935	EAST INDIAN RAILWAY—continued	
ADMINISTRATION AND MANAGEMENT*		4 Traffic, Working Expenses, and Net Revenue	968
1. Question of Administration of the Railways by the Central Government in India or by the Provincial Governments	926	5 Question of Loss by Exchanges in respect of Capital	969
Question of Administration by Private Companies	926	6 Other Details on various Points	969
BENGAL CENTRAL RAILWAY	930	Employment	969
BENGAL AND NORTH WESTERN RAILWAY	930	ENGINEERS (RAILWAYS, &c)	970
BHOPAL TO JHANSI, GWALIOR, AND CANNPUR		Engines and Rolling Stock	971
1. Importance attached to this Project; Expediency of the Line being on the Broad-Gauge	931	EXCHANGE, LOSS BY	971
Terms of Construction; Negotiations with the Great Indian Peninsula Company on the subject	932	EXPENDITURE (RAILWAYS).	
Delay in Construction, Progress being made	932	1. Evidence explanatory of the Views of General Stacrey upon the question of future Railway Expenditure	972
2. Documentary Evidence and Statistics	932	2. Views of General Dickens as to the Rate of Expenditure desirable	973
Bilaspur-Etawa Railway	933	3. Proposals of the Government of India, as advocated by Major Conway-Gordon, Details submitted by him in explanation and in support of the proposed Expenditure	973
Bombay Chamber of Commerce	934	4. Conclusions of Mr Westland and Mr. Danvers as to the Expediency of Increased Outlay on Railways, and as to the Annual Cost to be incurred	974
Branch Lines or Feeder*	935	5. Evidence explanatory of the Views of other Witnesses as to the Rates of Expenditure desirable	974
Bundelkund	936	6. Official Papers and Correspondence on the part of the Government of India and of the Secretary of State for India in Council	975
CAPITAL (RAILWAY EXTENSION)	941	7. Returns and Statistics showing the Expenditure down to the present Year	976
Chattisgarh District	944	8. Conclusions and Recommendations of the Committee	976
Coal	945	EXPORTS	977
CONDITION OF THE PEOPLE	947	EXTENSION OF RAILWAYS.	
CONSTRUCTION AND WORKING	948	1. Views of General Stacrey as to the Rate of Construction to be carried out	978
COST OF LINES		2. Conclusions and Suggestions of Sir James Caird	978
1. Relative Cost of Broad and Narrow Gauge Railways	958	3. Explanations and Suggestions on the part of Mr Westland and Mr. Danvers	979
2. Reduced Cost of Construction at the present Time as compared with former Years	958	4. Details submitted by Major Conway-Gordon in support of the Extensions proposed by the Government of India	979
Cotton	959		
CULTIVATION OF THE SOIL	964		
EASTERN BENGAL RAILWAY	967		
EAST INDIAN RAILWAY*			
1. Administration by the Company, its Efficiency	967		
2. Rates; Control exercised by Government	968		
3. Feeder Lines or Branches	968		

<i>EXTENSION OF RAILWAYS—continued.</i>	<i>PAGE</i>
6. Evidence of other Witnesses as to Progress desirable to be made in the Construction of New Railways	979
6. Exception taken by Mr. Cramford to any large Extension at the present Time	981
7. Papers and Correspondence on the part of the Government of India and of the Secretary of State	981
8. Conclusions and Recommendations of the Committee	981
<i>FAMINES, AND FAMINE LINES</i>	
1. Concurrence of Evidence as to the Importance of Railway Extension with a view to the Relief of Famines	982
2. Recommendations by the Famine Commissioners	982
3. Views of Sir James Card in favour of New Lines in Populous Districts	982
4. Loss of Life from Famines	983
5. Expenditure upon Relief	983
6. Advantages of Railway Construction in time of Famine	983
7. Effect of Increased Cultivation as a result of Railway Extension	983
8. Effect of a large Rise in the Price of Grain	983
9. Proposals of the Government of India as regards the Construction of Famine Lines	983
10. Arrangement respecting the Appropriation of a Million and a half Yearly by way of Famine Insurance	984
11. Question of using part of the Famine Fund as Interest on Capital for Protective Lines	984
12. Summary by the Committee and Conclusions arrived at	985
<i>FINANCIAL CONDITION OF INDIA (SURPLUS REVENUE)</i>	
<i>FINANCIAL RESULTS OF RAILWAYS</i>	
1. As to the Results hitherto	987
2. As to the Future Results	988
3. As to the Accounts	988
<i>GAUGE</i>	
1. Circumstances under which the Narrow or Metre Gauge was first introduced	989
2. Mileage Constructed, or under Construction, on the Broad and Narrow Gauge, respectively	990
3. Relative Cost of the two Gauges as regards Construction	990
4. Relative Cost of Maintenance and Working	990
5. Relative Capacity and Results as to Traffic	991
6. Extent to which the Broad Gauge or the Narrow Gauge should be adopted in future Construction	991
7. Break of Gauge, Inconvenience and Cost involved	993
8. Suggested Decision by the Committee as to the Gauge to be adopted	994
9. Recommendations by the Committee	994

	<i>PAGE</i>
<i>GRAIN</i>	997
<i>GREAT INDIAN PENINSULA RAILWAY</i>	998
<i>GUARANTEED AND GUARANTEED RAILWAYS:</i>	
1. Terms of the Guarantees to Existing Lines	998
2. Efficient Administration of the Guaranteed Railways	999
3. Financial Statistics	999
4. Generally as to the Question of further Guarantees, and the Limitations and Conditions under which they should be given	1000
5. Conclusions and Recommendations of the Committee	1004
<i>Interest on Loans</i>	1006
<i>Irrigation</i>	1007
<i>Jhansi-Cawnpur Railway</i>	1007
<i>Jhansi-Manikpur Railway</i>	1007
<i>Land Revenue</i>	1009
<i>LOANS (RAILWAYS, &c)</i>	
1. Views of General Strachey upon the Question of Borrowing in England or in India, Expediency of limiting the creation of Sterling Debt	1010
2. Explanations and Suggestions by Mr. Harrie, with reference more especially to the Question of Sterling Loans in England or of Rupee Loans in India	1010
3. Views of Major Conway-Gordon as to the Annual Amount to be borrowed for Railways, &c, and as to the Expediency of issuing Loans in England	1010
4. Evidence of Mr. Cramford strongly in favour of Loans being raised in India	1011
5. Explanations and Suggestions by Mr. Westland respecting the amount of Government Loans, and the Financial Result of borrowing in Sterling in England or in Rupees in India	1011
6. Information supplied by Mr. Waterfield together with Suggestions as to the Issue of Loans in India or in England	1011
7. Suggestions by other Authorities as to the Amount to be borrowed for Railways, and as to the Question of raising the Money in England or in India	1012
8. Concurrence of Opinions favourable to Rupee Loans in India, Difficulty as to Native Investment on account of the low Rate of Interest	1012
9. Amount of outstanding Loans or Debt; Extent to which taken up or held in India	1014
10. Communications from the Secretary of State in Council and the Government of India	1014
11. Summary by the Committee and Conclusions arrived at	1014

	PAGE	RATES AND FARES—continued.	PAGE
NAGPUR AND BENGAL RAILWAY (BOMBAY TO CALCUTTA):		2. Suggestion by Mr. Rendel for the appointment of a Commission for dealing with Questions of Rates and Fares -	1033
1. Advocacy of this Line; Importance attached to it by the Government of India -	1018	3. Views of the Government of India as to the Powers to be exercised by the Local Governments and by the Companies, respectively -	1033
2. Exceptions taken to the proposed Line, as not likely to be Productive -	1018	4. Amount of Rates and Fares, Great advantage in these being as low as possible -	1033
Native Capital -	1019	Remittances -	1034
Passenger Traffic -	1021	Responsibility (Railway Extension) -	1037
Population -	1021	Silver, Value of -	1039
PRIVATE ENTERPRISE:		SOUTH MAHARATTA COMPANY	
1. Considerations generally as to the Question of Railway Extension by means of Private Companies -	1022	1. Information relative to the Government arrangement with the Company, its Advantages -	1040
2. Question of Guarantees in connection with Private Enterprise -	1023	2. Approval of a similar arrangement with other Companies -	1041
3. Official Papers and Correspondence as to the Extent to which Operations should be entrusted to Private Companies -	1023	3. Protective character of the Line, which is on the Narrow Gauge, and will soon be opened -	1041
4. Conclusions and Recommendations of the Committee -	1024	4. Views of the Government of India in approval of the Line -	1041
PRODUCTIVE LINES		5. Exchange in connection with Capital Transactions -	1041
1. Distinction drawn by the Secretary of State for India between Productive and Protective Lines; Exceptions taken thereto -	1024	6. Very small Local Capital subscribed -	1041
2. Prospect of New Lines, and of Indian Railways generally, becoming productive -	1025	STATE RAILWAYS:	
3. Productive Lines proposed by the Government of India -	1025	1. Considerations generally as to the system of State Railways, as to extent to which desirable, and the Financial Arrangements to be adopted -	1042
4. Expediency of the best paying Lines being first undertaken -	1026	2. Proposals of the Government of India as to the Lines to be constructed -	1043
5. Financial Statistics relative to Productive Lines -	1026	3. Financial Statistics respecting the existing State Railways -	1043
PROTECTIVE LINES:		4. Approval by the Committee of the action of the State as well as of private Companies -	1043
1. Considerations as to the Expediency of pushing on Protective Lines, objection to the limitation laid down by the Secretary of State in the Matter -	1027	Statistics -	1044
2. View of the Government of India in favour of State Construction being limited to Unproductive Lines -	1027	TAXATION -	1050
3. Details respecting the Protective Lines proposed by the Government of India -	1027	TRADE -	1051
4. Expenditure -	1027	TRAFFIC -	1051
5. Conclusions of the Committee -	1027	Vizagapatam-Raipur Railway -	1054
PROVINCIAL GOVERNMENTS -	1028	WHEAT:	
PUBLIC WORKS DEPARTMENT -	1028	1. Question of Competition of Indian with American Wheat in the English Market -	1063
PUBLIC WORKS (REVENUE AND EXPENDITURE) -	1029	2. Cost of Production in India -	1063
PURCHASE OF UNDERTAKINGS -	1030	3. Extent of Cultivation and of Export hitherto -	1063
Quetta Railway -	1030	4. Prospect of Increased Cultivation and Export as a result of Railway Extension -	1064
RAJPOOTANA-MALWA RAILWAY -	1031	5. Conclusions arrived at by the Committee -	1064
RATES AND FARES:		WORKING EXPENSES	
1. Concurrence of Evidence in favour of Government Revision and Control; Recommendation to this effect by the Committee -	1033	1. Sundry Details respecting the Cost of Working the Indian Railways generally -	1065
		2. Broad Gauge Lines and Narrow Gauge Lines, respectively -	1066
		3. Statistics suggested by Mr. Rendel -	1065

N D E X.

[NB—In this Index the Figures following the Names of the Witnesses, and those in the Analysis of Evidence of each Witness, refer to the Questions in the Evidence, the Figures following *App* refer to the Pages in the Appendix; and the Numerals following *Rep* to the Pages in the Report]

ACCIDENTS Freedom from accidents on lines in India as compared with English lines, *Rendel* 5709, 5726-5742, 5927.

ACCOUNTS

Expediency of, the railway accounts being kept entirely separate, and of their showing clearly, the financial results from the railways, apart from the other financial operations of the State, *Graham* 2721-2723, 2749—Great advantage in the system of supervision and audit now in operation, which tends to prevent waste of money such as existed in the case of private companies in former years, *Durkens* 3314-3317.

Special difficulties in the accounts of the Government of India, they being prepared on a different principle to mercantile accounts; improvement if they were kept on purely commercial principles, *Conway-Gordon* 3509, 4468—Suggestion also that the railway accounts should be kept entirely outside the general accounts of the State, *ib* 3553, 3621, 3622, 3653, 3654, 4468.

Improvements desirable in the form of the accounts in the event of the Government borrowing in sterling in England, belief that there would not be much difficulty in so altering the form as to show the difference between the rupee and the sterling loan, *Westland* 4808-4812—Decided opinion that it is less inconvenient to alter the accounts than to show, as at present, transactions far removed from the truth by assuming that the rupee is one-tenth of a pound sterling, *ib* 4811, 4812.

Dis-agreement with Major Conway-Gordon's proposal that the railway and public works accounts should be separated from the general revenue accounts of the Empire; grounds for believing that there would be no advantage in this change, *Westland* 4813-4817—Statement that although separate railway accounts are not published, it is very easy to obtain information as to the result of working from the accounts presented to Parliament, *ib* 4957-4959, 5006, 5007.

Further explanation respecting the proposed change in the accounts with the object of removing obscurity as to the position of the Government in the event of a system of borrowing in England being adopted; absence of any intention to alter the Indian form of account, *Westland* 5221-5228—Suggestion also as to publishing separate accounts showing the exact results of the working of the railways, *ib* 5304-5306—At present the accounts are not available to the public in any form except that of the Railway Administration Report, which it is difficult to comprehend, *ib* 5306-5308.

Suggestions with reference to making such additions to the Finance Accounts as will show the real result to the government of the railway transactions of the year, impossibility of showing distinctly the question of exchange in these accounts, *Waterfield* 6106-6111, 6131—Explanation as to the mode of accounting for the receipts from protective lines made out of revenue not debited to productive lines, *ib* 6179-6183.

Explanation that throughout India when any railway is constructed it is charged against ordinary revenue when it is anticipated that it will not be a paying line, *Westland* 7109-7118—Grounds for the opinion that the accounts, as regards the contracts between the Provincial and Imperial Governments in regard to expenditure on railways, should be kept separate, *ib* 7426.

Recommendation by the Committee that the accounts of the financial results of the railways should be kept in such a manner, and so published, as to be easily available to and understood by the investing public, *Rep.* xi.

See also *Exchange, Loss by.* *Financial Results of Railways.*

Adam, F Forbes Views of Mr. Adam, as Chairman of the Bombay Chamber of Commerce, relative to the great importance of a large and rapid extension of railways throughout India, *App* 608-612.

ADMINISTRATION AND MANAGEMENT

Question of Administration of the Railways by the Central Government in India, or by the Provincial Governments.

Question of Administration by Private Companies.

Question of Administration of the Railways by the Central Government in India, or by the Provincial Governments :

Immense extent of India, and enormous business involved in the management of the railways, so that their administration by a Central Government Authority or Railway Commission would be little short of absurd, *Strachey* 31, 32—Enormous and multifarious duties discharged by the Government of India, so that it may well be relieved of the detailed administration of the railway system, *ib.* 258-264. 372.

Explanation that witness does not approve at present of the raising of loans by the Provincial Governments for the construction of railways, though the administration might be placed in their hands, together with the financial responsibility for working the lines, *Strachey* 265, 266

Evidence as to the advantages to be derived from the construction and control of railways in India by the Government of India or rather by the several Provincial Governments, *Sir J Caird* 393-398—Advantage if the Government had command of all the railways in India, efficient Government administration in Australia, *ib.* 492, 493. 505-515.

Conclusion that Government being obliged to run the risk in connection with guarantees, and the raising of the capital, had better take over the administration and the profits, facility by dividing the administration among the provinces, *Sir J Caird* 505-515. 546, 547 614-616. 631.—Use to be made of the resources and credit of India in connection with a system of administration by the different provinces, *ib.* 634

Observations regarding the effect of dual control on the management of the Indian railways, explanation hereon as to the control exercised by the Government over the rates, *Chapman* 782. 928-931 1025-1038.

Examination with reference to the amount of control which it is expedient that the Government should exercise over the management and rates of private companies, feeling of the Liverpool merchants that it is a dangerous system to hand over the traffic of India to private companies without a firm hold being kept by the Government, *Cope* 1285-1287. 1301-1306 1371-1378 1384-1391—Advantage of the system of a permanent guarantee, as enabling Government to maintain a control over the companies, *ib.* 1301-1303 1334-1337—Approval of the detailed management of railways by military engineers, *ib.* 1312, 1313. 1471

Opinion that the Government have now an experienced staff of railway officials, and that the State lines are equally well managed with those of the guaranteed companies, *Trevor* 1592-1604.

Approval of there being a distinct department of the Indian Government to attend to the construction and management of railways, *Graham* 272

Strong opinion that the Government should exercise a very considerable amount of control in the management of the railway, *Hardie* 2826, 2827—Suggestion that the railways should be managed by a board appointed by the Government in the same way that port trusts are managed, *ib.* 2929-2931.

Inexpediency of placing Indian railways under the management of public bodies similar to port trusts in India, *Dickens* 3187-3189—Belief that there would be very great difficulty if it were attempted to place the State railways under the management of a trust similar to that of the port of Calcutta or Bombay, *Crawford* 3805.

Great advantage of the control which the Government exercises over the East Indian line; expediency of extending this control to other lines when the contracts are brought to a conclusion, *Crawford* 3994-4002.

Contention that although the Government have taken over long lines at a small premium it does not prove that the lines would have been managed better had they been undertaken in the first instance by the Government, *Danvers* 6940-6942.

2. *Question of Administration by Private Companies :*

Conclusions as to the advantage, on the whole, of administration by companies instead of by the Government, *Strachey* 253-264. 372-374—Satisfaction further expressed with the companies' management generally in India, there being moreover an efficient Government audit of all expenditure, *ib.* 314-316.

Limited extent to which there should be Government control over the administration by private companies; degree of restriction desirable as regards rates, *Strachey* 1191, 1192.

Report, 1884—continued.

ADMINISTRATION AND MANAGEMENT—continued.

2 Question of Administration by Private Companies—continued.

Doubt as to the expediency of following the precedent in the case of the East India Railway with respect to enlisting companies in the management, *Sir J Casd* 704-708.

Belief that, as a general principle, the management of railways is carried out better by private companies than by the Government, *Chapman* 776-781—Delay and difficulties in many respects incidental to dual control by the Government and the companies, *ib.* 782. 928-931. 1025-1038

Advantage of management through a company, in so far as Government is saved the cost of increasing the establishment, the cost of pensions, and such other charges, *Robertson* 6598-6601—Expediency of giving companies which are formed with a Government guarantee, the entire control over the management of their own lines, *ib.* 6639-6641.

<i>See also Construction and Working.</i>	<i>Extension of Railways.</i>	<i>Directors.</i>
<i>Engineers</i>	<i>Financial Results of Railways.</i>	<i>Guaranteed</i>
<i>Railways, 2</i>	<i>Private Enterprise</i>	<i>Provincial Governments.</i>
<i>Fares</i>	<i>State Railways</i>	<i>Working Expenses.</i>
		<i>Gauge.</i>
		<i>Rates and</i>

Adoni-Kurnool-Guntoor Railway. Particulars respecting this line, as proposed by the Government of India in January 1883, *App.* 524, 533.

Afghan Wars Total of 11,840,000 l. as the Afghan War expenditure during the last twelve years, *Westland* 6181

Amount of war expenditure of India in respect of Afghanistan in each year since 1879-80, *App.* 693.

Agriculture See *Cultivation of the Soil.* *Gram.* *Wheat*

American Railways See *United States.*

Amraoti Railway Statement showing for each year the mileage, average age, cost, and general results of working, *App.* 781.

Amritsar-Pothankot Railway Estimated cost and results of this line, progress being made with its construction, as in January 1883, *App.* 545 532.

Documentary evidence submitted by Major Conway-Gordon respecting this line, as proposed by the Government of India, its advantages, estimated cost, &c, sanction given by the Secretary of State, *App.* 907. 919.

Ananatapur District. Statement showing the area, population, and loss of population, during the famine in this district, *App.* 537

Anderson, Lieutenant General Waltham Warden (Analysis of his Evidence)—Representation by witness of the East India Association, the Committee of the Association being strongly in favour of a large and rapid extension of railway communication in India, 711-714.

Desire of some influential capitalists in London to obtain certain concessions and guarantees from Government, by means of which the required capital may be raised, 715, 716 720 734—Construction of some railways in Kattywar (where witness was a resident for some nineteen years), by the native chiefs, desire of the latter for a junction of these lines with the Rajpootana Railway, and Veerungam, 717 723 732, 733—Willingness of the Native Princes of Kattywar to subscribe capital towards the construction of certain local lines, 718-723. 735, 736

Explanation that witness is not prepared to submit evidence in support of the memorial recently sent to the India Office by the East India Association, that is, as regards the precise ways and means of securing the proposed extension of railways, 724-731.

Army Services Examination as to the claims on India by the War Office in respect of the non-effective charges of the English army, practical admission of the claim of 2,200,000 l. by the Government of India, which amount it has agreed to pay, *Westland* 4818-4823 4862-4865

Grounds for the exclusion from the account of the surplus of last year, of the payment to the War Office of 1,000,000 l. on account of non-effective charges, *Westland* 5115-5118—Explanation that the current payments to the War Office are reduced from what they hitherto have been on account of a change in the method of reckoning them, extra payments beyond this reduced amount to be made so as to pay off the arrears, *ib.* 5117, 5118.

Statement of the net disbursements of the Home Treasury of the Government of India in respect of army services in each year since 1867-68; *App.* 696, 697.

Capital outlay on military works in each year since 1867-68, *App.* 698, 699.

Arni-Vellapuram Railway (Madras) Documentary evidence, and extracts from official correspondence, respecting the proposed construction of this line, and its advantages; sanction not yet given by the Secretary of State, *App.* 876-910.

Arrears of Interest (Guaranteed Companies). Explanation that in calculating the net earnings and the surplus profits, arrears of interest in former years are not taken into account; amount of such arrears, these not constituting any present charge upon the finances, *Strachey* 1179-1184.

Ashburner, Lionel (Analysis of his Evidence.)—Long experience of witness in the Indian Civil Service, he has served in every district in the Bombay Presidency, and was a member of the Bombay Government for some years, 6335.

Grounds for advocating the extension of the Sibi line of railway to Quetta, 6336-6415, 6416—Great importance of completing the link between Palanpur and Hyderabad, which would perfect the whole system of railways in that direction, 6336-6473-6477—Desirability of a line to Cawnpore through Godra to Gwalior, with the object of serving the immense district between the Great Indian Peninsula and the Rajpootana lines, 6336-6339 6478-6486.

Approval of a line from Jaitpore (Katawar) to Verawal, where there would be large traffic to visit the temples of Dwarka, 6339, 6445-6447—Suggestions as to the expediency of constructing other lines, with the object of opening up the country to the North and South of Bombay, belief that these lines would be not only advantageous to the people but would be likely to pay, 6340-6343 6439-6444 6487-6492.

Undoubted opinion that railways develop in a remarkable way the resources of the country, examples of large increases of land revenues which have taken place in consequence of the proposal for the Western Deccan Line, 6343, 6344 6405-6414 6426. 6437, 6438—Obstacles which exist in regard to the development of traffic in the Western Presidency generally, 6345 6448, 6449 6466-6470.

Conclusion that in the interest of the public and of the railway companies themselves, the rates should be reduced, successful competition of cart traffic with some of the railways on account of the rates being so high, 6345-6347 6386-6396 6421-6422—Statement of the indirect advantages which have accrued to India from the extension of the railways, large districts of jungle which have of late years been brought under cultivation as one of the results, 6348-6350, 6417-6420 6425-6429, 6520-6526.

Consensus of opinion in India that the extension of railways should be pushed on more rapidly than of late years, strong native feeling in favour of extension, 6351-6354, 6365-6367, 6453-6455—Expediency of giving to local governments greater latitude as regards granting guarantees from provincial revenues; argument that if local governments had this power, they could more successfully resist the frittering away of local funds upon insignificant objects, 6355, 6372-6379 6451, 6452, 6493-6518.

Examination as to the agency to be adopted for the construction of the lines, opinion that the Government should not leave all the productive lines to the companies, but should make paying lines compensate for those which are not productive, 6356-6364, 6380-6385, 6450 6489-6491 6534-6537—Approval of the terms entered into by the Government with the South Mahratta Line, which were advantageous to both parties, 6358, 6359.

Anticipation that the time is not far distant when railways will be made in India without the necessity for a guarantee, belief that many lines might be built without guarantee at the present time, if companies were allowed to construct branches, 6360-6363 6380-6385—Opinion that the Government, with its large staff of trained engineers, can build lines better and more economically than a company, 6364, 6450.

Disapproval of such an expansion of railway construction as was proposed by the Bombay merchants; belief that such rapidity of construction would not be economical, 6365, 6366—Grounds for the conclusion that grain should be carried in bulk, and not in bags, as a means of reducing the rate of freight on the railways; explanation that grain can be moved, in case of the break of gauge, more easily in bulk than in bags, 6396-6399, 6423, 6424, 6430-6436.

Expediency of leaving the question of railway finance to be settled between the Government of India and the Secretary of State, 6402-6404—Advocacy of an extension of the railway to Quetta, both as a military and a commercial line, belief that this line would eventually carry sufficient paying traffic from Afghanistan and from Central Asia, 6415-6418.

Argument that where railways are extended into a district, they bring the traffic with them, 6421-6425—Importance of railways, especially during the monsoon, for carrying grain and cotton, which, if transported otherwise, leads to large losses; exaction by native chiefs, which would be avoided by means of railways, 6460-6469—Explanation of the indirect evils of a break of gauge; enormous wastage on account of the goods lying about in the open, 6470-6472, 6538-6544.

Report, 1884—continued.

Ashburner, Lionel. (Analysis of his Evidence)—continued.

Information generally respecting the proposals made by the Government of Bombay that the local governments should be given power to pledge the provincial revenues for railways; desirability of extending the present system of local cess by means of which the works would be carried out, 6493-6518.

Belief that in many cases a railway could be constructed at a less cost than an expensive road over a difficult soil, 6519—Statement that at the present time, in the Deccan, there are considerable districts still available for cultivation, 6525—Enormous quantities of wheat exported to Europe from the Bombay Ports, the Presidency being a large wheat-producing country, with the exception of the coast districts, 6529-6533.

Assam. Opinion that the projected line to Assam and Chittagong might with advantage be made on the metre gauge, *Chapman* 764.

Particulars respecting the lines to Assam, as proposed by the Government of India in January 1883, *App.* 530.

Audit of Expenditure. Efficient Government audit of railway expenditure by companies, the management by the latter being satisfactory, *Strachey* 314-316—Advantages of the system of supervision and audit of railway now in force, as compared with the practice in former years, *Dickens* 3314-3317.

Australia. Practice in Australia for the several Governments to make their own railways with capital borrowed in this country, and to manage them when made, successful working of the arrangements, *Sir J. Caird* 391. 393. 493.

B.

Banagher-Harihar Railway. Particulars respecting this line, as advocated by the Government of India in letter of 23rd January 1883, *App.* 513—Progress being made with the construction of the line, *ib.* 526

Documentary evidence submitted by Major Conway-Gordon showing the views of the Government of India and of the Madras Government in favour of the construction of the line, approval on the part of the Secretary of State, *App.* 905, 906. 920.

Barakur-Nagpur Railway. Opinion that one of the most important of the railways proposed by the Indian Government is the Barakur-Nagpur line, grounds for considering it expedient that this line should be undertaken by a private company, with a limited guarantee, under Bengal Central terms, *Conway-Gordon* 4346-4365. 4371-4394.

Particulars respecting the Barakur-Nagpur project, as proposed by the Government of India in letter of 23rd January 1883, *App.* 513, 514.

Documentary evidence and extracts from official correspondence respecting the proposed construction of this line, and its advantages, sanction not yet given by the Secretary of State, *App.* 880-900. 920.

Bareilly-Philibhut Railway. Estimated cost and results of this line; progress being made with its construction, as in January 1883; *App.* 525. 532.

Documentary evidence submitted by Major Conway-Gordon respecting this project, as proposed by the Government of India, its advantages, estimated cost, &c.; sanction given by the Secretary of State, *App.* 913, 914. 919.

Baring, Honourable E. Minute by Major Baring, dated 25th July 1881, submitting his views upon the subject of railway extension and the mode of providing for the interest; suggestion that the interest may be met by the funds available by the cessation of the annual loans, and the development of the railways, *App.* 497-504.

Statistics submitted by Mr. Baring in support of the conclusions set forth in the foregoing Minute, *App.* 505, 506.

Behar. Particulars respecting the lines proposed by the Government of India in January 1883 for the connection of Behar and the North West with Assam, *App.* 525.

See also *Famines, &c. Orissa and Behar Irrigation Works.*

Bell, J. Lowthian. Statement by Mr. Bell, Chairman of the British Iron Trade Association, as to the present time being very favourable for railway extension in India on account of the greatly reduced cost of iron and steel railway materials, &c., *App.* 647, 648.

Bellary-Kistna (Hudupur Extension). Documentary evidence submitted by Major Conway-Gordon showing the views of the Government of India and of the Madras Government in favour of the construction of this line; approval on the part of the Secretary of State, *App.* 869-874. 919.

Benares to Calcutta. Suggested broad gauge line from Benares to Calcutta through the coal region, about 400 miles long, *Sir J. Caird* 453, 454, 567—Value of the proposed line from Benares to Calcutta as giving an additional outlet to the fertile Gangetic plain; obstacle to this result being satisfactorily secured by means of the East Indian Railway, *ib* 619-623.

Benares to Pooree Length and cost of this project, as proposed by the Government of India, to be left to private enterprise, *App* 530—Total length of 530 miles, the estimated cost being 4,600,000 *l.*, *ib*.

Bengal. Particulars respecting the several lines proposed by the Government of India in January 1883, *App* 524-526 530.

See also the Headings generally throughout the Index.

BENGAL CENTRAL RAILWAY:

Explanations respecting the cost in the case of the Bengal Central line, *Strachey* 1232-1237—Gradual improvement of the traffic returns on the Bengal Central Railway, *Bullen-Smith* 2367, 2368.

Explanation with reference to the arrangements made by the Government in the case of the Bengal Central Railway, which is a broad gauge line; considerable premium which the shares of this company now realise in the market, *Dickens* 3086-3091, 3099, 3134-3139 3190, 3191, 3216 3219—Estimate that the cost of the line will be about 6,000 *l.* a mile, and that of the Bengal North Western 4,500 *l.* a mile; contention that these two lines form the basis of a fair comparison of the cost as between the metre and the standard gauge, *ib* 3100-3109 3197-3211.

Belief that the Bengal Central line is the only one in India with a guarantee during construction which is to cease after the line is completed, importance that a company should be assured of its ultimate success before they consented to terms of this kind, *Dickens* 3135-3139

Considerable risk to the Bengal Central Company for the reason that directly the limit of the guarantee is over they are in the position of an ordinary commercial company, *Conway-Gordon* 4356, 4364—Opinion that the rates and fares prescribed by the company, without any power of reduction by the Government, are injudiciously high, *ib* 4412-4415.

Statement of the main provisions in the case of the arrangement made by the Government with the Bengal Central Company, by which a guarantee was given for a limited period; powers reserved by the Government to purchase this line after thirty or after fifty years, and if not purchased the line to lapse to the Government after ninety-nine years, *Waterfield* 6072-6074, 6084, 6312.

Explanation as to the cost of the Central Bengal line being so much less than that of the Eastern Bengal, large and difficult bridges which were necessary on the latter line, *Danvers* 6908-6913.

Satisfaction expressed by the Secretary of State in Despatch of December 1881, respecting the concession made to the Central Bengal Company, *App* 508.

Receipts, or estimated receipts, since 1881-82; *App* 733.

Explanation of the "Bengal Central" terms, and the conditions as to Government purchase, *Rep* x—When the prospects of return from any proposed line are not well assured, the Bengal Central terms offer a special inducement to the inventor by guaranteeing interest on capital during construction, *ib* xi.

Bengal Chamber of Commerce. Moderate proposals of the Bengal Chamber of Commerce in regard to railway extension, *Conway-Gordon* 3560.

Memorial from the Bengal Chamber to the Governor General in 1884 on the subject of railway extension, and the increased facilities desirable, *App* 595-597.

BENGAL AND NORTH WESTERN RAILWAY.

Concession in the case of the Bengal and North Western Company by the Government giving up a share of the profits above 6 per cent, *Strachey* 247—The stock has been at a discount ever since its issue, *Sir J. Caird* 390—Belief that the Bengal and North Western Railway is in as good a condition as ever it was, notwithstanding that its 4 *l.* shares are now to be had for 3 *l.* 10 *s.*, *Chapman* 918-921.

Information respecting the general position of the Bengal and North Western Company (of which witness is a director); explanation as to the terms on which the Government have power to purchase the line, *Trevor* 1671-1679, 1715-1725, 1808, 1809—The Northern Bengal line is earning considerably more than 4 per cent., *ib* 1805.

Statement as to the terms made with Government by the Bengal and North Western Company, which is a narrow gauge line; entire absence of guarantee in the case of this company, company,

Report, 1884—continued.

BENGAL AND NORTH WESTERN RAILWAY—continued.

company, the shares of which are at present at a considerable discount, *Dickens* 3093-3097, 3192-3196 3221—Populous country, with large produce, through which the railway runs, *ib.* 3309, 3310

Statement of the terms upon which the Government have agreed to purchase the line if it be taken over, *Conway-Gordon* 4401-4405—Grant of land made to the company by the Government, but no direct pecuniary assistance given, power reserved by the Government to purchase the line after thirty or after fifty years, *Waterfield* 6082 6084 6283, 6284.

Revenue accounts for each of the years 1881-82, 1882-83, and 1883-84, *App* 751-753—Administrative transactions for the above years, *ib.* 755 757 759

Revenue accounts for each half-year from 31st December 1881 to 31st December 1883, *App.* 762-765—Statistics of the cost of working, &c., *ib.* 776 798 *et seq*

Summary of the terms under the "Bengal and North Western" arrangement, and conditions as to purchase by the Government, *Rep.* x.—Approval by the Committee of the Bengal North Western terms when a line is expected to give a considerable immediate return, *ib.* xi

Beypore-Gudalur-Mysore Railway (Madras). Length and cost of this project, as proposed by the Government of India, to be left to private enterprise, *App.* 531.

Bezwaada to Nizam's Frontier. Documentary evidence submitted by Major Conway-Gordon showing the views of the Government of India and of the Madras Government in favour of the construction of this line, approval on the part of the Secretary of State, *App.* 907, 908, 920.

Bhavnagar-Gondal Railway Statistics of the cost of working this railway under different heads, *App.* 798 *et seq*

BHOPAL TO JHANSI, GWALIOR, AND CAWNPUR.

1. Importance attached to this Project, Expediency of the Line being on the Broad Gauge.
2. Terms of Construction; Negotiations with the Great Indian Peninsula Company on the subject
3. Delay in Construction: Progress being made.
4. Documentary Evidence and Statistics

1. Importance attached to this Project; Expediency of the Line being on the Broad Gauge

Evidence respecting the advantages of the proposed Bhopal and Cawnpur line, valuable opinion in regard to the probable development of the country through which it would pass given by Sir Lepel Griffin, *Chapman* 864-871, 891-899 926, 966-969—Special importance of the Bhopal line that it will bring Northern India into direct communication with Bombay, *ib.* 866.

Expediency of the new line from Bhopal to Gwalior and Cawnpur being constructed on the broad gauge, grounds for this opinion, *Coke* 1297—Statement that the two trunk lines which the public are most anxious to see constructed are the Bhopal-Gwalior and Cawnpur extension, and the direct line from Nagpur to Calcutta, *ib.* 1452-1459

Desirability of constructing a line from Bhopal to Cawnpur *via* Jhansi, belief that such a railway would be about the most profitable that could be made, *Trevor* 1635—Opinion that to build a railway from Bhopal northwards to Gwalior and Cawnpur on the metre gauge would be suicidal, as there would be three breaks of gauge, *ib.* 1852.

Statement that the country which the Bhopal State Railway is to traverse is populous and well cultivated, opinion that it is in no sense a poor country, *Glover* 2043, 2044, 2047-2060 2159-2166—Belief that there is no part of India where a line could be more profitably worked than the country through which the Bhopal line passes, contention that it will pay interest within two years after construction, *ib.* 1875-1877, 1879, 1880—Construction of the Bhopal line on the broad gauge to satisfy the Begum, who was jealous because Scindia had his line made broad gauge to Gwalior, *ib.* 2024-2026.

Great importance of the proposed line from Bhopal to Jhansi and Gwalior, with an extension to Cawnpur, *Lord* 2463-2477; *Conway-Gordon* 4346-4365—Approval of the construction of the new line from Bhopal to Cawnpur, rather than widening the gauge of the Rajputana line, on account of the advantage of opening up a new area of country, *Conway-Gordon* 4435, 4426.

Statement that, assuming the Bhopal and Gwalior line were made, the tendency of the traffic below Agra would still be to Calcutta, *Crawford* 3862-3876—Dissent from the view that a railway from Bhopal to Gwalior would pay, if only from the local products passing over it, *Hunter* 7408.

BHOPAL TO JHANSI, GWALIOR, AND CAWNPUR—continued.**1. Importance attached to this Project, &c.—continued.**

Decided opinion that the Bhopal, Gwalior, and Cawnpur extension should be on the broad gauge, contention that this line is of such importance that it should be undertaken at once, *Danvers* 6895-6897—Concurrence in the suggestion that the Bhopal line should be constructed on the broad gauge, *Lord* 2469

2. Terms of Construction; Negotiations with the Great Indian Peninsula Company on the subject

Information respecting the unsuccessful proposals made by the Directors of the Great Indian Peninsula Company to the Indian Government to construct the line from Bhopal to Gwalior and Cawnpur without any guarantee, subsequent proposal that a limited guarantee should be given by the Government, *Chapman* 751-760. 821-833. 900

Additional evidence with reference to the proposals made to the Government in regard to the construction of the line from Bhopal to Gwalior and Cawnpur, decided opinion that money for this line could not now be raised without a guarantee, *Chapman* 908-913. 948-951. 979 993-1010. 1017-1019. 1039-1041—Explanation as to the terms of the limited guarantee which was proposed to the Government in the case of the Bhopal line; condition proposed by the Government that after ninety-nine years the line should lapse to themselves, *ib* 1011-1013—When the last proposal was made to the Government for the construction of the railway they did not accept the terms, but imposed the same conditions as were in force with the Bengal and North Western Company, *ib* 1006.

Refusal of the Secretary of State to accept the offer of the Great Indian Peninsula Company to construct the Bhopal line upon the condition of a guarantee, on account of the liability involved, *Strachey* 1042-1046—Negotiations with the company subsequently for the construction of the line without a guarantee, eventual suspension of the negotiations through the company declining to undertake the line without a guarantee, *ib* 1047-1052.

Opinion that though the Bhopal and Gwalior line should be sanctioned it should not be guaranteed by the Government at the expense of the people of India, *Crawford* 3945-3985, 3986.

Witness submits that the line should be undertaken by private companies with a limited guarantee, under Bengal Central terms, *Conway-Gordon* 4340-4365. 4371-4394. 4469-4472.

Desire on the part of the Great Indian Peninsula Company to construct a line from Bhopal to Agra and Cawnpur in extension of their main line, postponement of the negotiations, the question being referred by the Government to the present Select Committee, *Waterfield* 6077. 6106. 6273-6275. 6282-6288.

3. Delay in Construction; Progress being made

Statement that the charges of delay in regard to the construction of the line from Bhopal to Cawnpur and Gwalior, have been much exaggerated, explanation that the delay which did occur was owing in a large measure to the dual control exercised by the Government and the Company, *Chapman* 747-750. 782—If the proposal of the Great Indian Peninsula Company had been accepted the line would have been completed by the present time, *ib* 755. 768-775.

Explanation as to the cause of the unwillingness of the Home Government to carry out what was the obvious wish of the Indian Government in regard to the Bhopal, Gwalior, and Cawnpur line; belief that one reason was that the proposal was inimical to the East Indian Railway, which is the property of the Government, *Chapman* 891-899. 927. 970-986. 1019-1024—Further statement that the delay in obtaining engines for the Bhopal Railway was an inevitable incident of the inconvenience of dual control, belief that the engines cost more than they would have done had they not been required so hurriedly, *ib* 908. 932-934.

Construction by witness at the present time of the Bhopal State Railway on the broad gauge; that is, under contract, *Glover* 1832-1838. 1860-1864. 1946 2016-2028—Description of the working on the Bhopal Railway, two important and expensive bridges to be constructed on this line, *ib* 1872-1874. 1878. 2078-2084.

4. Documentary Evidence and Statistics :

Particulars respecting this line, as proposed by the Government of India in letter of 23rd January 1883, *App.* 513. 514.

Documentary evidence submitted by Major Conway-Gordon showing the views of the Government of India and of the Bombay Government in favour of the construction of this line; approval on the part of the Secretary of State, *App.* 900-902. 920.

Bhopal-Ujyam Railway. Length and cost of this project, as proposed by the Government of India to be left to private enterprise, *App.* 529.

Bilaspur-Etawa Railway. Opinion that the selection of the line from Bilaspur through Saugor and the newly discovered coal-field of Rewah is not a very good one, *Dickens* 3161, 3162—Expediency of investigating the question of a line from Bilaspur to Calcutta, as the country through which it runs is so very little known; entire absence of justification for a railway at the present time in that district so far as local traffic is concerned, *Crawford* 3768, 3769

Character of the through traffic expected upon the line from Bilaspur to Seetarampur on the completion of the line from Nagpur to Bilaspur, admission that at first there will not be a large local traffic, *Conway-Gordon* 4377-4386—Belief that the foregoing line to Seetarampur will induce a large amount of grain traffic to spring up between the Chhattisgarh Division and Calcutta, opinion that the amount of traffic to Calcutta will be sufficient to justify a large expenditure, *ib.* 4380-4391.

Advantage of the Bilaspur line in opening the Umeri or Rewah coal-field, particulars as to the quality and extent of this coal, *Hunter* 7151, 7235-7240—Great importance of the proposed Bilaspur-Etawa Railway in relieving famine in Bundelkand and the northern famine tracts, *ib.* 7151—Fair probability that the portion of the line between Bilaspur and Seetarampur, as distinguished from the other portions, will pay when it is constructed, *ib.* 7284.

Desire of the Government that the Bilaspur and Nagpur line should be made under a limited guarantee, proposal by Mr. Miller on the other hand to make it on the South Mahratta terms, *Hunter* 7388—Impossibility of estimating at present the amount of traffic which may be expected on the line from Bilaspur to Calcutta, *ib.* 7425, 7426.

Documentary evidence and extracts from official correspondence respecting the proposed construction of this line, and its advantages, sanction not yet given by the Secretary of State, *App.* 902, 903, 920

Birkmyre, William (*Analysis of his Evidence*)—Is sole partner in the firm of Birkmyre Brothers, of Calcutta, removal of this firm from Scotland to India ten years since, 3325-3329

Character of the extensive business carried on by witness, who employs about 5,000 natives, 200 criminals, and seven Europeans, manufactures from this firm sent to all parts of the world, 3330-3335 3395-3398—Large number of up-country men employed by witness at Calcutta, the natives readily emigrating if they have an inducement in the way of employment, 3331, 3332—Statement respecting a pamphlet written by Major Conway-Gordon upon the subject of the Indian wheat trade in its relation to railway business, 3336, 3337.

Conclusion that one of the most undeveloped resources of India is her saleable labour, examples illustrative of this view, 3338 3391-3394—Opinion that railways cannot be extensively extended in the country without State assistance, 3339, 3340—Inexpediency of extending metre gauge lines except as feeders in very isolated districts; belief that this gauge is exceedingly unpopular not only with merchants but with the natives themselves, 3341-3349.

Information generally as to the expediency of extending the railway system in India; importance of keeping railway finance more distinct from the finances of the Empire, 3350-3352, 3359-3374, 3379-3390—Desirability of the Government spending more on railways, proposal that there should be spent in the next seven years what the present limit would give in twenty years, 3352, 3379, 3380, 3386.

Suggestions with reference to the means by which money for railways should be raised; that is, by loan in London, it being the cheapest market, 3353-3358, 3378—Strong opinion that in India the Government should have power to reduce the rates, so that they might be just to the Railway Companies and at the same time a benefit to the public, 3361-3364—Expediency of there being on the Indian Council members possessing practical experience with the working of railways, 3370.

[Second Examination]—Great importance that the rates charged on Indian railways should be maintained at a low figure, grounds for this conclusion, 3399, 3408-3410 3460, 3461 3468, 3469, 3488-3494—Approval of a guarantee of 3½ per cent, being given to the companies and in addition the profits in excess of that guarantee; belief that with this arrangement the capital required would be obtained without any difficulty, 3400-3407 3434-3442.

Explanation that the advancement of the rates by the Great Indian Peninsula Railway is equivalent to a cessation of traffic to the extent of ten miles on each side of this line, 3408-3410—Statement that the daily wages of coolies in the villages of Bilaspur is as low as 1½ d. per day, 3411, 3412, 3476—Desire on the part of the commercial community of India, that lines should be made for commercial purposes and shall be no burden to the country, 3413-3416.

Belief that there is no strong feeling on the part of the natives in favour of an extension of railways, 3417—Statement that America with a much more sparse population is far ahead of India in regard to railways, 3418, 3453-3455.

Birkmyre, William. (Analysis of his Evidence)—continued.

Information respecting the price of wheat in India; conclusion that wheat may be raised with advantage in the Central Provinces at 11 s. 8 d per quarter, 3419-3433. 3458, 3459 3465. 3466—Favourable opinion as to the price at which wheat can be raised in India as compared with America, 3423-3429

Statement that in India reduction of railway rates always means increased dividend; examples in support of this conclusion, 3436-3438—Assertion that although a railway may not show a large dividend to the shareholders it may still be an enormous benefit to the district and country through which it passes, 3443-3452 3470, 3471

Greater accessibility of the Government in regard to the reduction of rates than is the case with private companies, 3460, 3461—Opinion that private companies are preferred by the people of India to the Government lines in regard to traffic arrangements, 3462-3464—Contention that in no sense is it a function of the Government so to impose rates that the export trade should be stimulated, 3468, 3469.

Advantage of a low rate of exchange to the farmer in regard to the price of wheat, 3472-3474—Opinion that the greater part of India requires opening up by railways, 3477—Importance of increased facilities for the transmission of jute and other products from districts at present unserved by railways, 3478-3481—Conclusion that making a railway in districts is unduly costly, 3482-3484.

Bland Bill. Apprehensions as to the suspension of the Bland Bill which have operated to prevent people in England from taking up loans in silver, probable effect of the suspension of this Bill to cause a fall in the value of silver in India, *Hardie* 2798-2800. 2911-2914. 2921. 2997-2999.

Bombay to Ahmedabad and Delhi. Expediency of the line from Bombay to Delhi by Ahmedabad being constructed upon the broad gauge, *Chapman* 762.

Bombay, Baroda, and Central India Railway. Rates of the Bombay and Baroda line kept low because of the competition by sea all the way, *Bythell* 2624. 2630—Closeness with which the Bombay and Baroda line follows the East Indian in regard to the amount of traffic carried, *Rendel* 5623.

Revenue accounts for each half year from 31st December 1881 to 31st December 1883, *App.* 760, 761.

Statement showing for each year the mileage average age, cost, and general results of working, *App.* 774, 775.

Statistics of the cost of working under different heads, *App.* 798 et seq.

Bombay to Calcutta. Great improbability of any through goods traffic on a line between Bombay and Calcutta *Strachey* 299—Absence of any greater advantage in a direct Calcutta and Bombay railway than there would be in opening out any other district, entire absence of through traffic other than first-class passengers going by the English mail, *Rendel* 5699-5705

Objections to a line half broad and half narrow gauge between Calcutta and Bombay; belief that the cost of making such a change would be something like a million sterling, *Rendel* 5710-5713.

See also *Nagpur and Bengal Railway.*

Bombay Chamber of Commerce. Excessive character of the extensions proposed by the Bombay Chamber of Commerce and other parties in India outside the Government, *Strachey* 24, 25—Difference of opinion between witness and the Bombay Chamber in regard to their proposal that twenty millions should be spent annually upon railways, contention that ten millions annually is enough, *Lord* 2512, 2513—The proposals of the Bombay Chamber go quite beyond reason, *Conway-Gordon* 356a.

Representations on the subject of the rate of railway progress made to the Government by the Madras and Bombay Chambers of Commerce, *Westland* 4760-4763—Comment upon the proposal of the Bombay Chamber as to the mode of raising the required capital, *ib.* 476a.

Communication from the Secretary to the Chamber of Commerce, Bombay, to the Government of Bombay, dated 16th January 1884, urging on the part of the Chamber the immediate construction of certain lines, without waiting for the sanction of a Select Committee of the House of Commons, *App.* 581.

Letter from the Secretary to the Chamber in December 1883 showing the views of the Chamber as to the importance of an extended system of borrowing for the more rapid construction of railways, *App.* 586.

Memorial of the Bombay Chamber of Commerce containing suggestions in detail respecting the extension of railways, the great importance thereof in the interests of trade, and the facilities required, *App.* 597-603.

Proceedings of the general meeting of the Bombay Chamber, held on the 11th February 1884; views of different members strongly in favour of a large and rapid extension of railways throughout India, *App.* 608-619.

Bombay Chamber of Commerce—continued.

Reference by the Committee to certain evidence as strongly in favour of more rapid construction, but not to the extent advocated by the Chamber of Commerce of Bombay and Madras, *Rep vi.*

Bombay Port Great advantages which the port of Bombay possesses over that of Calcutta, especially in regard to the shorter voyage to all European ports, mercantile intelligence and enterprise also superior to that of Calcutta, *Crauford 3682-3684, 3710-3716, 3728-3733, 3737-3743, 3831-3833*—Larger facilities for conducting the trade from the interior of India to Europe through Bombay than through Calcutta, *ib 3683*—Statement that the development of Bombay means direct trade with India, and less trade going through England, *ib. 3831-3833*

Information with further reference to the relative merits of the ports of Bombay and Calcutta; contention that for every reason Bombay must remain always the best port of India as regards Europe, *Crauford 3898-3909, 3948, 3949.*

See also *Calcutta Exports.*

Bombay Presidency Suggestions as to the expediency of constructing various lines with the object of opening up the country to the north and south of Bombay; belief that these lines would be not only advantageous to the people, but would be likely to pay, *Ashburner 6336-6343, 6439-6444, 6487-6492*—Obstacles which exist in regard to the development of traffic in the Western Presidency generally, *ib 6345, 6448, 6449, 6466-6470*—Statement that at the present time in the Deccan there are considerable districts still available for cultivation, *ib 6525*—Production of much more grain in the Presidency than is consumed therein, *ib. 6530*

Particulars respecting the several lines proposed by the Government of India in January 1883, *App 524-526, 531.*

See also *the Headings generally throughout the Index.*

Branch Lines or Feeders Statement that the Government have needlessly discouraged companies that desired to construct feeders to their respective systems; contention that on the other hand the companies should be encouraged to construct any extension of their lines which they think fit, *Trevoor 1569-1575, 1585-1587, 1605, 1620-1634, 1759-1762, 1777*—Suggestions as to the amended course to be adopted in order to induce private companies to undertake branch lines, *ib. 1585-1587*—Importance that lines which are feeders of systems should be managed as part of such systems, *ib. 1592.*

Opinion that small branches to existing trunk lines would pay handsomely if they were judiciously chosen, *Bullen-Smith 2363-2366*—Believe that the most rapidly remunerative outlay would be on feeding branches to existing lines, though the branches might not pay in themselves, they would pay in the traffic which they would bring on the main lines, *Dickens 3048, 3117-3124, 3167.*

Argument that if branch lines were to be considered as revenue-producing lines on their own basis, the restrictions of the Secretary of State would prevent the construction of any branch line at all, *Conway-Gordon 3538*—Exceptional instances in which lines, which are not trunk lines, are considered to be of primary importance, *ib. 4112-4115, 4123.*

Suggestion that if the Government are to share in the advantages of feeder lines there should be inserted in the contract a general clause that the companies should construct whatever branches may be required, the necessity of such branches should be a question of agreement between the company and the Government, *Conway-Gordon 4733-4737.*

See also *Gauge.*

Break of Gauge. See Gauge

Bridges Means of meeting the difficulty as to bridges on the proposed coast line from Calcutta to Madras, system of ferries suggested, *Sir J. Caird 627-630*—Statement that for light broad gauge lines there would be no increased cost for bridges; conclusion generally that the same bridges and the same rails will do for light broad gauge as for narrow gauge lines, *Conway-Gordon 6815-6824.*

Bullen-Smith, James. (Analysis of his Evidence)—Was formerly a merchant in Calcutta, and was for some years a member of the Legislative Council, represents the views of the East Indian Association in regard to Indian railway extension, 2296-2301.

Opinion that much more may well be done at the present time than has been done in regard to the extension of railways, 2302, 2303—Expediency that in all arrangements with private companies there should be provision that the Government are eventually to become the owners of the railways, grounds for this opinion, 2304, 2305, 2311, 2369-2372.

Advocacy of a system of construction by private companies, with a permanent Government guarantee, importance in each case that the Government should select the scheme, 2306-2310, 2325, 2385, 2386.

Bullen-Smith, James. (Analysis of his Evidence)—continued.

Information generally as to the best means of raising the capital necessary for the proposed railways; belief that the required amount can only be raised in England, 2312-2320, 2328-2337, 2377-2383.—Approval of an annual expenditure of six or eight millions; expediency of the Government making lines that, with the exception of famine lines, would prove remunerative, 2321-2324, 2387-2400, 2441-2446.

Desirability of making all the main lines in North India upon the broad gauge, 2326.—Importance of confining the metre gauge to small systems through hilly districts, and to feeders to the main lines, 2326, 2327, 2373-2376.

Belief that the rates of money in England and India are gradually approximating to each other, although the normal rate of money for purposes generally is considerably higher on that side than on this, 2335.—Opinion that very little Indian capital is absorbed in industrial enterprises of any kind, there is an accumulation of capital in India, but it does not go in these channels, 2338-2343.

Information generally in regard to the inevitable loss by exchange involved by borrowing in England, so long as the Indian accounts are kept on the present system, explanation that the loss caused by a rise in the exchange would without doubt fall on India and not on England, 2344-2348, 2401-2411, 2416-2437, 2457-2459, 2447-2456.

Approval of the construction of a line through the Central Provinces, on account of the indirect advantages which it would bring to the Government; belief that such a line would induce a large trade to spring up in that country on account of the increased cultivation of the land, 2349-2358.—Sea communication with Orissa only at certain seasons of the year during the fair monsoon, communication by canal also established as far as Midnapur, 2369-2361.

Opinion that small branches to existing trunk lines would pay handsomely if they were judiciously chosen, 2363-2366.—Gradual improvement of the traffic returns of the Bengal Central Railway, 2367, 2368.

Dissent from the views of the Chambers of Commerce of Madras and Bombay in regard to the proposal that an immense expenditure be at once undertaken, 2398-2400, 2441-2446.

Explanation regarding the inconvenience experienced last year through the great scarcity of wagons on the East Indian Railway, which resulted in a serious block at Howrah, the chief cause of this block was the insufficient port accommodation at Calcutta, 2413-2415, 2438-2440.—Statement that during the past few years India has been receiving silver very cheaply, and for that reason there must have been in some form or other a great gain to the country, 2457-2459.

Bundelkund Necessity of the Bundelkund Railway for the purpose of saving that country from famine, *Trevor* 1649.—Project on hand at the present time to protect the Bundelkund districts by irrigation, large amount of money already spent upon the Betwa Canal, *Westland* 4917-4919.

Description generally of the character of the Bundelkund country as an example of the meaning of famine tract, gradual decrease of the population in this country since 1853, *Hunter* 7141, 7400-7406.—Great importance of a railway for the relief of Bundelkund in the event of famine, statistics showing the enormous amount of food which can be carried to this district by a railway as compared to that brought by carts, *ib.* 7143, 7232-7234.—Explanation that millet and not wheat is the staple food of the poorer population of Bundelkund, *ib.* 7404.

Proposals in letter from the Government of India of 22nd July 1881 for the construction of a Bundelkund line, as one of a series of railways for protection against famine, *App.* 492-495.

Burmah (British). The Burmah line is earning considerably more than four per cent., *Trevor* 1805.—If the surplus produce of British Burmah can be made available for the famine tracts of India then the problem of famine relief would be nearly solved, *Hunter* 7258.

Bythell, John K. (Analysis of his Evidence)—Is a merchant carrying on business in Bombay and Manchester, 2605.—Concurs generally in the evidence given on the subject of Indian Railways by Mr. Lord, 2606.

Grounds which amply justify the Government in making new railways to a great extent, statement that there are nine million acres of land in the Punjab which would probably be brought into cultivation if railways were made, 2607-2610, 2704-2710.

Numerous engineering mistakes which were made in India in past days; renewal of portions of the Great Indian Peninsula Railway upon several occasions at a cost of 70,000 *l* a mile on account of the bridges being washed away, 2608.—Contention that the existing surplus revenue from railways should be treated as a reserve for increased expenditure, and not appropriated to lessen taxation in any shape, 2610.

Great

Report, 1884—continued.

Bythell, John K. (Analysis of his Evidence)—continued

Great importance of encouraging the cultivation of wheat in India for exportation to England, instead of obtaining it from America, impossibility of developing the Indian wheat trade except by means of railways, 2611—Expediency of increasing the expenditure upon railways by about four millions annually, 2612.

Opinion that the proposed Nagpur and Bengal line is of the first importance on account of its going through a tract of country south of the East Indian line, 2613—Reasons for considering it highly important that a line for famine purposes should be made from Vizagapatam to Raipur, 2614—Considerable saving which would arise in conveying produce to the sea by means of railways rather than by carts, 2614.

Examination as to the control which it is advisable that the Government should exercise over rates, strong opinion that the present Committee should recommend that Government should retain the power, in any new concession, to fix the rates, and not give it up under any circumstances, 2615-2652. 2654-2663. 2666*-2703.

Statement that although Indian cotton is one-half the price it was in 1869, yet the Great Indian Peninsula Railway Company are charging more for carriage than they did in that year, 2617-2620—Rates of the Bombay and Baroda line kept low because of the competition by sea all the way, 2624. 2630.

Higher rates for carriage of wheat charged by the Indian railways than is charged in America, 2625—Opinion that if the rates were reduced the production of wheat in India would be materially increased, 2627—Argument that the reduction of railway rates will lead to material increase of traffic, 2628-2630. 2636. 2685-2687.

Considerable difference of opinion which exists between the merchants of Bombay and the Great Indian Peninsula Railway Company in regard to rates, indignation meeting called in Bombay on this subject, 2639, 2640—Contention that the result of the high charges on the Great Indian Peninsula Railway will be that the cotton cultivation will be driven from India to America, 2641, 2642.

Expediency of the Government borrowing money for the construction of railways as State undertakings, rather than that they should give up the control over the rates, 2650—Disapproval of an arrangement by which the Government should only intervene as regards rates after a definite rate of interest had been paid, belief that such an agreement would be impracticable, because of disputes as to what constituted capital and what revenue, 2651-2653. 2655, 2656.

Statement that fifty-nine millions of passengers travelled on the railways in India during the past year, 2654—Belief that the exactions by Native Chiefs in the way of customs and transit duties are being generally reduced, 2664-2666—Endeavour on the part of the municipalities throughout India to levy transit dues for municipal purposes until stopped by the Government, 2665, 2666.

Explanation that the lower rates on other lines than on the Great Indian Peninsula are probably owing to the sea and river competition with which they have to contend; impossibility of introducing a line to compete with the Great Indian Peninsula, 2669-2674—Considerable injury to cultivators on the Great Indian Peninsula line, inasmuch as a large proportion of the price obtained in Europe for their produce goes for railway rates, 2681.

Further consideration of the means to be adopted for raising money for the construction of the proposed lines, grounds for the opinion that it is of no use to look to India for any portion of the capital, 2711—Strong objection to breaks of gauge on the Indian Railways, 2711, 2712—Contention that the metre gauge should be entirely confined to self-contained systems, 2711, 2712—Belief that the working of broad gauge traffic is less expensive than narrow gauge working, 2711.

C.

Cachar See *Chittagong*.

Cachar-Golaghat-Debrugarh Railway (Assam) Length and cost of this project, as proposed by the Government of India to be left to private enterprise, *App.* 530.

Card, Sir James, K C B. (Analysis of his Evidence.)—Witness was the English member of the Indian Famine Commission, in which capacity he traversed a large portion of the country, numerous witnesses having been examined and evidence taken in different localities, 375

Strong recommendation in the Famine Commission Report that railways should be extended as the chief means of providing succour in times of famine, 376, 377—Excessive cost of transport by carts as compared with railway transport, especially during famines, 377—Fulfillment practically of the recommendations of the Famine Commissioners up to the present time as regards the annual rate of extension, it having been proposed to construct 10,000 miles at the rate of 400 miles a year, 377-379.

Card, Sir James, K.C.B. (Analysis of the Evidence)—continued.

Several circumstances which are now favourable to more rapid extension than was projected when the Famine Commissioners reported, better financial condition of India, whilst the cost of construction has greatly fallen, 380-384.—Great benefits anticipated as regards diversity of employment from the extension of railway, 381 432, 433.—Views of Sir Charles Wood in 1861 as to the exceeding importance of works of irrigation, &c., 381-383.

Exception taken to the distinction drawn in the Despatch of the Government of India of 23rd January 1883 between productive and protective lines, 384-386.—Evidence strongly in favour of the construction in the first instance of productive lines, through populous districts, before unproductive lines are undertaken, grounds for concluding that this is the most effectual plan for saving life in times of famine, 384-388. 417-430. 503, 504.—Dense population in several districts which have suffered from famine, instance in the case of Orissa, 316. 403. 503, 504.

Costly construction where lines have been guaranteed by Government, there being room for much reduction, 389, 390.—Insufficient time hitherto for testing the financial results from the State lines, 390.—Very indifferent success which has attended the plan of raising capital through private companies without the same guarantee as in the case of the older lines, 390, 391.

Conclusion that if there be any risk in respect of new lines the Government must accept it, it being financially unwise to induce English capitalists to enter upon unsuccessful railway speculations for the benefit of India, 391. 398.—System of grants of land to companies in the United States in order to facilitate their raising capital for the lines, 391, 392.—Practice in Australia for the several Governments to make their own railways with capital borrowed in this country, successful working of the arrangements, 391. 393.

Evidence as to the advantages to be derived from the construction and control of railways in India by the Government, or rather by the several Provincial Governments 393-398.—Expediency of Government control and adjustment of the rates, 393.—Opinion that it is not desirable to construct so rapidly as is proposed by Government, and that it would suffice if in the next four years 6,000 miles were made, annual cost involved, 396.—Favourable time at present for economical construction, 398.

Inconvenience and disadvantage in there being only one line (the East Indian) for the conveyance of the immense traffic in grain, &c. to Calcutta, 399-401.—Suggestion that about 1,000 miles of broad gauge would complete the great through line, 402 453-456.—Proposed use of the metre gauge for feeders to the main line 402 408. 516.—Advantage in the employment of able-bodied natives in the construction of lines in famine time, 402.

Great importance attached to a line for the protection of Orissa from the effects of famines, which have been most disastrous in that district, suggested extensions so as to provide a direct line from Calcutta to Madras, 403-406.—Sufficiency of the metre gauge for the proposed line to Cuttack in Orissa, with extensions along the Madras coast, probability that a narrow gauge line would pay, 403-406 516.

Great hindrance to the traffic when there is a break of gauge on a main or through line, 407. 409.—Expediency of the line from Bombay to Nagpur being continued thence to Calcutta as a broad gauge line, 407.—Sufficiency of the narrow gauge for providing relief in time of famine, 408.

Improbability of American wheat competing successfully with Indian wheat in the British markets if wheat can be produced in India at the reduced cost of 12 s. a quarter, as now stated by the Indian Agricultural Department, 410-412.—Considerations as to the relative cost of carriage of wheat to the sea coast in America and in India, 412.—Better quality of the finer American wheats than of the finer wheats of India, 412.

Great development expected in the produce generally of India from the extension of railways, 413.—Witness is not so sanguine as many people about the increased produce and export of wheat; very favourable seasons in recent years, which cannot be relied upon to continue, 413 467-477. 533-550.—Increase of the population at a rate sufficient in two years to absorb the annual export of wheat, 413. 494-496.

Larger proportionate increase in the value of exports from India since 1873 than in the case of any other country, particulars hereon, 413.—Better position of India for resisting famines the more she is induced to grow rice, wheat, &c., by an increased foreign demand, 414.—Increasing apprehension of foreign countries in respect of the growing export trade of India, illustration in the case of Italy, 413. 502.

Reference to the cost of construction of railways, per mile, in France, the amount of public debt per head of population, and the population served by each mile of railway, 414.—Details respecting the great development of railways in the United States notwithstanding the sparse population in some districts, 414-418.

Further

CaIRD, Sir James, K.C.B. (Analysis of his Evidence)—continued

Further objection to the construction of unproductive lines in India with borrowed money, until the more populous districts are first served, 417-430. 439. 543-545—Localities of different famines adverted to in connection with the question of population: greater advantage of protective lines in the more thickly populated districts, 419-426—Prospect of ultimate remuneration wherever the soil is cultivated and there is much produce as well as passenger traffic to be carried, 427-430.

Effect of extended railway facilities not only in stimulating production but in leading to an increase of manufactures, 431-435—Advantage of the lower rate at which capital could now be raised for Indian railways than in 1878-79, whilst the cost of construction would be much less, 436-438—Importance of the Madras lines for the prevention of famine, though they have not been remunerative; very heavy cost of construction, 440-442—Costliness also of the *Sindh*, *Punjab*, and *Delhi* line, though it is very useful for famine protection, 443

Illustration in the case of the East Indian Railway of the great value of lines through populous districts sometimes visited with famine, 444-446—Very little disposition among the natives to emigrate from one district to another, 447—Discouragement of English capitalists from investing in new enterprises as some existing lines have proved unremunerative, whilst the best routes are already taken up by other lines, 448-450. 543-546

Prospect of considerable extension with financial success by reason of the much lower capital outlay required than in former years, average of 13,500 *l* per mile as the cost of existing railways, whilst lines can now be made for less than half that amount, 451, 452—Belief as to the cost of narrow gauge lines being fifty per cent. less than that of the broad gauge, 451. 497-499—Suggested broad gauge line from Benares to Calcutta, through the coal region, about 400 miles long, 453, 454. 567—Further approval of the Bombay and Nagpur line being completed to Calcutta, on the broad gauge, considerable local traffic expected, 455, 456. 485-487.

Further consideration of the cost of production of wheat in different parts of India; opinion that this is nearer 18 *s.* 6 *d.* than 12 *s.* a quarter, 457-468. 517-521. 560—Improbability of successful wheat export to England at the present prices, 469, 470—Very small export of wheat and rice, as compared with the surplus grain produce of the whole country, 471-477. 494-496

Examination as to the relative conditions of India and of America in respect of traffic, population, &c., with reference to the question of railway extension in each country, 478-484. 531, 532—Improvement if railway competition were feasible in India, as in the United States, difficulties in the way, 488-493. 513—Conclusion as to the necessity of borrowing for Indian railways in England, as being the cheapest market, 488.

Advantage if the Government had command of all the railways in India, efficient Government administration in Australia, 492, 493. 505-515—Question considered as to the saving by adopting the narrow instead of the broad gauge, for the proposed coast line between Madras and Calcutta, 497-500—Contemplated use of ferries (as in America) instead of costly bridges over large rivers in districts where the traffic is not large, 500, 501.

Conclusion that Government being obliged to run the risk in connection with guarantees, and the raising of capital, had better take over the administration and the profits, facility by dividing the administration among the provinces, 505-515. 546, 547—Approval of the broad gauge generally, if the difference in cost is only ten per cent., 516. 626

Effect of increased prices in inducing increased cultivation of wheat, whilst an extension of railways would also tend to increase the production and the export, 517-529. 533-540. 563—Explanation that two-thirds of the people of India live upon grain, other than wheat, and only one-third upon rice, 528.

Mileage of railways in proportion to population in the principal countries of the world, fifty times less accommodation (as measured by population) in India than in Australia, 530—Interference with native industries by the introduction of English fabrics, 541, 542—Grounds for concluding that as regards cost of transport of wheat, &c., by railway, the rates in India assimilate to the low charges in America, 548-554.

Failure hitherto of efforts to raise capital in India for railways, so that guarantees in one form or another have been resorted to, 555-559—Consumption by cultivators of the cheaper grains, wheat being sold in payment of rent and labour, 561, 562—Extremely good cultivation in many parts of India, witness has seen some admirable cultivation of tobacco and sugar cane, 564, 566—Practice of burning manure as being the readiest and cheapest fuel, very important experiment to the effect that the ashes of burnt manure give a better crop than is given by the manure in a fresh state, 566—Immense value of railways for the development of coal and iron, 567, 568.

Grounds for the conclusion that, on the whole, famines have been more severe in densely than in sparsely populated districts, 569-575—Nature of the facilities for the relief

Card, Sir James, K C B. (Analysis of his Evidence)—continued

relief of famine in Madras and Southern Bombay; favourable situation of Madras for receiving supplies by sea, 576-579—Conclusion further expressed that Government should for some years to come confine their financial risk to construction in the more populous and productive districts; reluctance of the public to take the risk, 580-584—Much less risk attending railway-extension in America than in India, 585-587.

Great importance further attached to a line from Calcutta to Madras, passing through and connecting the rich country of Orissa with the country of the Godavery and the Kistna, 588-593 660—Doubt as to much advantage from the provision of storage for wheat at places where there is a break of gauge, 594-597.

Facility with which the Government might raise, for the next six years, 3,000,000 £ a year in the London market, at a low rate of interest, in addition to a similar expenditure out of the revenues of India, for the extension of railways, Government taking all the risk and all the control, 598-603—Explanation that witness does not propose a larger expenditure than 6,000,000 £ a year, so as to include outlay on irrigation works, 604-610—As regards protection against famine, irrigation works are quite secondary to railways, 607.

Result of past experience that the required capital cannot be obtained from the people of India, or from private sources, so that the State should provide it, 611, 612—Doubt as to what being produced to such an extent as to exhaust the soil, power of applying manure if there be increased cultivation through higher prices, 613 642—Very remunerative results from sugar cultivation, the soil being highly manured, 611-613.

Explanation that in advocating administration and management by each province, aided by able officers, witness does not imply that the Public Works Department at Calcutta should be abolished, 614-616 634.

Examination as to the population and produce of the districts through which the new lines advocated by witness would run, consideration of objections on certain points 617-631—Value of the proposed line from Benares to Calcutta as giving an additional outlet to the fertile Gangetic plain, obstacle to this result being satisfactorily secured by means of the East Indian Railway, 619-623—Means of meeting the difficulty as to bridges on the proposed coast line from Calcutta to Madras, 627-630

Further statement as to the advantage of giving employment on new lines in time of famine, 632, 633—Use to be made of the resources and credit of India in connection with a system of administration by the different provinces, 634—Large tracts of country suitable for wheat cultivation, where there is irrigation, 636-638, 643-645—Extensive area under wheat, the extent of cultivation depending chiefly on the price in England, 639-641—Probable causes of the low railway rates in America, notwithstanding the dear labour used in construction, 646

Explanation with further reference to the reasons for suggesting that the extensions for the next four years shall be at the rate of 1,250 miles a year, this is threefold the average of the last ten years, 648-659—Prudential reasons, other than financial considerations for not proposing a more rapid rate of construction than 1,250 miles yearly; probable disturbance of the labour market unless the construction be distributed over different districts, 654-664.

Circumstance of one-half of the average expenditure of India during the last ten years having been provided out of other sources than taxation, such as the land revenue and opium duty, 658—Further statement as to the advantage of construction in time of famine, so as to give employment, though in any case the more populous districts should first be protected, 665-670.

Probability of wheat being substituted for other less paying crops, if its price should rise, rather than of new land being brought into cultivation, 671-675—Opinion that inclusive of rent, labour and other charges, the cost of growing wheat in India may fairly be taken at 19 s or 20 s a quarter, 676-685.

Probability of construction by companies not requiring much Government control if the guarantee were limited to a fixed amount of capital, 686-691—Grounds for the opinion that railway extension is very advantageous as leading to diversity and increase of employment, 692-695 698—Increased facilities for dealing with famine in localities through which railways pass, though they may cause an increase of population to be protected, 696-698.

Further consideration of the advantages of private enterprise in America, witness fully approving of construction and working by companies in India if it were practicable, 699-706—Doubt as to the expediency of following the precedent in the case of the East Indian Railway with respect to enlisting companies in the management, 704-708—Limited experience of witness as regards the actual results of the working of the State railways or of guaranteed lines, 709, 710.

Calcutta.

Report, 1884—continued.

Calcutta Strong efforts at Calcutta to keep up with Bombay in regard to appliances for the port, construction by the East Indian Railway Company of an embankment 2,000 feet long on the Hooghley, *Crawford* 3682, 3683 3710, 3711—Statement that both the freight and the insurance from Calcutta are higher than from Bombay, *ib* 3712-3716. 3728-3733 3948, 3949—Absence of competition between Calcutta and Bombay in regard to the export trade; very large competition between the two ports in conducting the import traffic, *ib* 3741.

Argument against the concentration of railways into Bombay rather than into Calcutta, the latter port having a large and growing business with the Australian Colonies and China, which must be considered as well as that of Europe, *Crawford* 3902-3904.

See also *Benares to Calcutta*, *Bombay to Calcutta*, *Bombay Port* *East*,
Indian Railway, *Exports*, *Madras (Coast Lane)*, *Nagpur and Bengal*
Railway

Calcutta Port Trust Law recently passed by the Bengal Council to enable the Calcutta Port Trust to borrow in London, which previously it had not been possible to do; explanation that this is merely a permissive law which enables such bodies to borrow in the London market if the Home Government approve, *Waterfield* 6161-6170—Undertakings upon which it is proposed to spend four or five millions by the Port Trust and the Municipality, *ib*. 6161-6171.

Calcutta and South Eastern Railway. Obligation upon the Government as to taking over the Calcutta and South Eastern Railway, after having paid a great deal of money under the guarantee, *Strachey* 242, 243

Revenue accounts for each of the years 1881-82, 1882-83, and 1883-84, *App* 751-753—Administrative transactions for the above years, *ib* 754, 756, 758—Revenue accounts for each half year from 31st December 1881 to 31st December 1883, *ib* 762-765

Statement showing for each year the mileage, average age, cost, and general results of working, *App*. 775

Campbell, Sir George. Opinion of Sir George Campbell, when Chief Commissioner of the Central Provinces, that we should look rather to the development of traffic by the railway than to provide for an existing traffic, that is, with reference to a certain line for connecting the Central Provinces with Southern India, *Conway-Gordon* 5381-5383

Canals Great importance of canal extension, which for various reasons is much more economical than railways for conveyance of inland traffic, *Wood* 2190-2294.

Statement of canal expenditure on capital account in each year since 1867-68, *App*. 726, 727.

See also *Irrigation*

CAPITAL (RAILWAY EXTENSION):

Limit to the amount which capitalists are prepared to lend to Government for railway extension; that is, unless the rate of interest on loans be increased, *Strachey* 9-12—Argument that the capital debt in respect of railways and other public works should never be so increased that the net charge upon it should exceed what may be considered a reasonable sum to be applied from the public revenue to stimulate the extension of public works, *ib*. 12, 13.

Grounds for concluding that by offering slightly better terms than were given to the South Mahratta Company, Government will obtain the required capital even with the condition that they may purchase the lines at the original capital price, prospect of speculators coming forward in the first instance, *Strachey* 81-99—Necessity of some contribution from the revenue of India in order to obtain capital for railway extension, the question being as to the most efficient method, *ib*. 283-287.

Prospect of considerable extension with financial success by reason of the much lower capital outlay required than in former years, average of 13,500 *l* per mile as the cost of existing railways, whilst lines can now be made for less than half that amount, *Sir J. Caird* 451, 452.

Failure hitherto of efforts to raise capital in India for railways, so that guarantees in one form or another have been resorted to, *Sir J. Caird* 555-559. 611, 612

Desire of some influential capitalists in London to obtain certain concessions and guarantees from Government, by means of which the required capital may be raised, *Anderson* 715, 716. 720. 734

Further statement as to speculators being likely in the first instance to take up stock in new undertakings, issued under certain conditions, in the expectation of investors coming in subsequently, instance in the case of the Nizam's railways, *Strachey* 1196-1206

Belief that there need be no difficulty in raising sufficient capital for the purpose of largely extending Indian railways, *Clarke* 2268, 2269.

Suggestion generally as to the steps which ought to be taken for the purpose of
284. 6 a 3 obtaining

CAPITAL (RAILWAY EXTENSION)—continued

obtaining capital for the schemes, opinion that to make sure of floating new companies there should be a Government guarantee of 4 per cent, *Dickens* 3065-3077, 3183-3186 3225-3228 3238-3249 3268-3270—Conclusion that the Government of India cannot rely upon public companies to supply any large amount of capital, except with a substantial guarantee, *ib* 3305-3308. 3314-3317

Causes of the disjunction of the English money market to invest in Indian railway without Government guarantee, *Conway-Gordon* 4307-4309—Statement to the effect that the larger part of the capital raised in India for railways is held by Europeans, *ib*. 4475-4477 4481-4483.

What is required for the construction of Indian railways is an investing and not a speculating class, *Rendel* 5640.

Statement showing the amount of capital raised to the end of each year, and the annual amount withdrawn for expenditure since 1858, *App.* 750

See also *Cost of Construction. Expenditure. Guaranteed Railways Loans Private Enterprise Savings Banks*

Garraiges (Bolling Stock). See Engines and Rolling Stock.

Carts (Native Transport) Excessive cost of transport by cart as compared with railway transport, especially during famines, *Sir J. Caird* 377—Decided opinion that railways do not displace any of the native industries in connection with carriage; contention on the contrary that native carriers are more constantly employed as the result of a railway coming through a district, *Glover* 1953. 2000, 2001—Considerable saving which would arise in conveying produce to the sea by means of railways rather than by carts, *Bythell* 2614.

Cawnpur Belief that the proposed line from Cawnpur to Bhopal ought to pay on account of the through traffic, rather than from the local traffic, *Dickens* 3163-3166—Proposed famine line from Cawnpur to Jhansi, *Westland* 4751—Desirability of a line to Cawnpur through Godea and Gwalior, with the object of serving the immense district between the Great Indian Peninsula and the Rajpootana lines, *Ashburner* 6336-6339 6478-6486.—See also *Bhopal to Jhansi, Gwalior, and Cawnpur*

Cawnpur-Farakhabad Railway. Statement showing for each year the mileage, average age, cost, and general results of working, *App* 777—Statistics of the cost of working under different heads, *ib* 798 *et seq*

Central Provinces Approval of the construction of a line through the Central Provinces on account of the indirect advantages which it would bring to the Government, belief that such a line would induce a large trade to spring up in that country by reason of the increased cultivation of the land, *Bullen-Smith* 2349-2353.

Views of Sir George Campbell, when Chief Commissioner of the Central Provinces, as to the expediency of a certain line connecting these provinces with Southern India, *Conway-Gordon* 5381-5383

Particulars respecting the several lines proposed by the Government of India in January 1853, *App.* 524-526. 529. 530.

Centralisation Immense extent of India, and enormous business involved in the management of the railways, so that their administration by a central Government authority or Railway Commission would be little short of absurd, *Strachey* 31, 32.

See also *Administration and Management Provincial Governments.*

Chambers of Commerce. Dissent from the views of the Chambers of Commerce of Madras and Bombay in regard to the proposal that an expenditure of sixty millions should be undertaken in a limited period, *Bullen-Smith* 2398-2400. 2441-2446.

See also *Bengal Chamber of Commerce. Bombay Chamber of Commerce Madras Chamber of Commerce.*

Chapman, F S (Analysis of his Evidence).—Long experience of witness as an Indian Civil Servant; he is a Director of three Indian Railway Companies, 737-739.

Decided opinion that the extension of railways in India has not been carried on so rapidly as it ought to have been, the Indian Government have, in fact, been wanting in courage in this respect, 740 875—Desirability of raising the necessary capital by means of private companies, expediency at the same time of the Secretary of State being free to utilise both the agencies of State railways and of companies according to circumstances, 741-743. 901, 902.

Grounds for the opinion that if it be decided to extend railways in India the Government should not incur any risk whatever in the matter; steps which should be taken to induce the public to come forward to make the proposed lines, 744-746 786-800 810-822.

Valuable statistical information respecting Indian railways given in the "Gazette of India,"

Chapman, F. S. (Analysis of his Evidence)—continued.

India, 745 881—Considerable ignorance of the English people in regard to the circumstances of Indian railways, 744 879-881

Statement that the charges of delay in regard to the construction of the line from Bhopal to Cawnpur and Gwalior have been much exaggerated, explanation that the delay which did occur was owing in a large measure to the dual control exercised by the Government and the Company, 747-750, 782.

Information respecting the unsuccessful proposals made by the directors of the Great Indian Peninsula Company to the Indian Government to construct the line from Bhopal to Gwalior and Cawnpur without any guarantee, subsequent proposal that a limited guarantee should be given by the Government, 751-760, 821-835, 900—Assertion that if the proposal of the Great Indian Peninsula Company had been accepted the line would have been completed by the present time, 755, 768-775.

Undoubted opinion that all through communication lines in India should be on the broad gauge, contention that it is fatal to attempt to interpose a different gauge in great arterial communications, 761-764, 873, 874, 935, 936—Expediency of the line from Bombay to Delhi by Ahmedabad being constructed upon the broad gauge, 76a.

Belief that on the South Mahratta line, which is a self-contained system, the metre gauge is very suitable, 763—Opinion that the projected lines to Assam and Chuttangong might with advantage be made on the metre gauge, 764.

Statement that there is nothing prejudicial to the development of trade and commerce in the presence of Government directors on the boards of private companies, 765-767, 783-785—Belief that, as a general principle, the management of railways is carried out better by private companies than by the Government, 776-781—Delay in many respects incidental to dual control by the Government and the companies, 782

Explanation that the guarantee proposed to be given is only nominal, brief period of nursing and development only required in the case of Indian railways, 787-79a—Statement that the cost of Indian railways is at the present time about one-half of what it was formerly, one of the chief causes of this cheapness of construction is the decreased price of materials, 796, 800 807-809 836-844 854-861, 937-939

Decided opinion that no line should be constructed, which within a reasonable period would not pay 4 per cent. upon its cost, exception to this rule in regard to strategical and protective lines undertaken by the Government upon their general credit, 797-800

Extraordinary effect which railways have had in developing the resources and increasing the prosperity of India, large increase in the rate of wages on account of the introduction of entirely new employments, 802-806, 876-878, 903-905—Extensive tracts of country brought into cultivation by railways passing through them, 803.

Average of 40,000 $\frac{1}{2}$ a mile as the cost of the Eastern Bengal Railway when constructed, 808, 809—Necessity for special arrangements and negotiations between the Government and private companies in the event of a line being deviated for strategical or protective purposes, belief that the interests of the commercial line to be made would not be antagonistic to those of the strategical line, 845-853.

Opinion that there is at the present time a much better supervision of the money spent upon railways than existed formerly; more complete audit of expenditure also than was the case in the earlier days of Indian railways, 857, 858—Statement that in former years the whole of the platelaying was done by Englishmen, whilst it is now done by native workmen, 860, 861—Explanation that when the Great Indian Peninsula Railway is extended from Nagpur to Calcutta, the total distance between Bombay and Calcutta will be shortened by about 200 miles, 862, 863.

Evidence respecting the advantages of the proposed Bhopal and Cawnpur line, valuable opinion given by Sir Lepel Griffin in regard to the probable development of the country through which it would pass, 864-871, 891-899, 926, 966-969—Special importance of the Bhopal line that it will bring Northern India into direct communication with Bombay, 866—Statement by the Government of India that it would be fatal to construct the line from Jhansi to Mankpur upon any other than the broad gauge, because it would connect the Bhopal line to Cawnpur with the East Indian Railway, 871.

Belief that the proposed Nagpur line will be a most valuable trunk railway, and will prove to be the postal line between Europe and Calcutta, 872—Distinct check which railway extension has received of late owing to the Government not having given the encouragement which they promised to do, 877, 878, 887-890—Anticipation that the time is not far off when private English enterprise will freely undertake Indian railways without State aid in any form, 882-886.

Explanation as to the cause of the unwillingness of the Home Government to carry out what was the obvious wish of the Indian Government in regard to the Bhopal, Gwalior, and Cawnpur line, belief that one reason was that the proposal was unmital
284.

Chapman, F. S. (Analysis of his Evidence)—continued.

to the East Indian Railway, which is the property of the Government, 891-899. 927. 970-986. 1019-1024.

Strong opinion that the general condition of the people of India has been materially improved by means of the railways, example of this shown by the enormous hoards of silver ornaments brought to the Mint to be converted into rupees when the famine occurred, 903-905—Disapproval of placing any limit on the borrowing powers of the Indian Government for the purpose of railways, 906

Further statement that the delay in obtaining engines for the Bhopal Railway was an inevitable incident of the inconvenience of dual control, belief that the engines cost more than they would have done had they not been required so hurriedly, 908. 932-934.

Additional evidence with reference to the proposals made to the Government in regard to the construction of the line from Bhopal to Gwahior and Cawnpur; decided opinion that money for this line could not now be raised without a guarantee, 908-913. 948-951. 979. 993-1010. 1017-1019. 1039-1041

Information with further reference to the necessity, in the case of railway extension, of State guarantee; opinion that the guarantee should take the form of a subsidy, every shilling of which should be repaid to the Government when the corner was turned and the line was profitable, 914-917. 922. 987-992. 1014-1016—Belief that the Bengal and North Western Railway is in as good a condition as ever it was, notwithstanding that its 4 l shares are now to be had for 3 l. 10s; 918-921.

Contention that it is immaterial whether loans are raised in India in silver or in gold in India, explanation that borrowing in silver is entirely nominal, as it does not represent a payment on the part of the people who use silver, 923-925.

Further observations regarding the effect of dual control on the management, explanation hereon as to the control exercised by the Government over the rates, 928-931. 1025-1038—Argument that if the Indian railways, notwithstanding such disadvantage as the loss of back interest and losses on exchange, can earn 4 per cent, it is a strong reason to go on increasing their number, 940-942

Contention that as regards commercial lines, the Indian Government should not undertake any guarantees unless they are convinced that within a certain number of years the lines will pay at least 4 per cent, 952-965—Statement that the change which has taken place in the Government policy regarding guarantees and railway extension has led to considerable loss of money by influential men in the City of London, 979, 980.

Further explanation as to the terms of the limited guarantee which was proposed to the Government in the case of the Bhopal line; condition proposed by the Government that after ninety-nine years the line should lapse to themselves, 993-1013—When the last proposal was made to the Government for the construction of the Bhopal Railway, they did not accept the terms, but imposed the same conditions as were in force with the Beggal and North Western Company, 1006.

Chattisgarh District Expediency of extending the railway from Nagpur to Bilaspur towards the Chattisgarh district, *Trevor* 1647—Negotiations with regard to the Chattisgarh and Nagpur line postponed by the Secretary of State until the Report of the present Committee is received, *Westland* 4853, 4854—Opinion that the line between Chattisgarh and Calcutta will be a paying line, but will in no sense be protective, on account of the sparseness of the population, *ib.* 4891. 4898.

Examination regarding the grain-producing districts of India and their power of supplying sufficient food in the event of famine; statement that the Chattisgarh district is the nucleus of the food-producing country, *Hunter* 7140-7143. 7190-7192. 7252-7282. 7389-7415—Annual production in the Chattisgarh country of 241,000 tons of grain more than its population consumes, *ib.* 7140. 7148-7149*. 7393. 7394.

Explanation that the fertility of Chattisgarh country is partly due to the rich soil, but chiefly to the fact that it has the most uniform and trustworthy rainfall in India, *Hunter* 7140. 7166, 7167. 7309-7311—Generally less price of the wheat which is raised in the district, *ib.* 7140. 7142, 7143. 7190-7202. 7210. 7303-7305. 7389-7393

Explanation that the surplus produce of the Chattisgarh district would feed about a million-and-a-half of people annually, and that during a famine it is a very small part of the population which so requires feeding, *Hunter* 7259-7261—Impossibility for the existing railway to carry away the surplus produce of the Chattisgarh district, for the reason that the cost of cartage is so great that it will hardly pay, *ib.* 7266-7270—Grounds for the opinion that the wheat of Chattisgarh would find its way partly to Calcutta and partly to Bombay, *ib.* 7278-7282.

Statement that at the present time, in the absence of railways, the surplus of 240,000 tons of wheat struggles outward from the Chattisgarh district by cart traffic, partly to the Nagpur Railway, and partly to Jubbulpur, *Hunter* 7393-7399.

See also *Visagapatam-Rajpur Railway.*

Chittagong.

Chittagong The projected line to Chittagong might be on the metre gauge, *Chapman* 764—Importance of the Chittagong line, with an extension to Assam, *Trevor* 1583—Desirability of constructing a main line from Chittagong into Cachar, possibly to be ultimately extended to Assam; belief that such a line would pay if it were cheaply made, *Duckens* 3151-3156.

Civil Services (India). Statement of the net disbursements of the Home Treasury of the Government of India in respect of the Civil Services in each year since 1867-68; *App.* 696, 697.

Clarke, Hyde. (Analysis of his Evidence)—Is a Civil Engineer and is intimately acquainted with Indian railways; has published various papers on the subject of management of railways in India, 2264, 2265.

Grounds for considering it expedient to extend the railway system in India on a large scale, and to expend from fifty to sixty millions in the next five years, 2266, 2267, 2270—Belief that there would be no difficulty in raising sufficient capital for the purpose of largely extending India railways, 2268, 2269—Opinion that an extension of railways would not only lead to a higher rate of wages but would materially benefit the condition of the country in every way, 2270-2273.

Coal Immense value of railways for the development of coal in India, *Sir J. Caird* 567—Information as to the character to the coal in the neighbourhood of the Rewah Valley, *Glover* 2098-2105 2133, 2134.

Great advantage possessed by the East Indian over the Great Indian Peninsular Company as regards the price of coal, the cost to the former Company is at the rate of 1 d per ton per mile, whilst to the latter it is from 5 d to 6 d per ton, *Crauford* 3745, 3746 3950-3953 3957—Opinion that a line in connection with the Rewah coal-field worked as a State line would pay its expenses, *ib.* 3770, 3771—Impression that the coal lately obtained from Warora is of inferior quality and the supply inadequate, *ib.* 3955, 3956—Coal carried by the East Indian Railway to Jubbulpur for the use of the Great Indian Peninsula line, carriage of this coal only charged, as the coal-fields do not now belong to the Company, *ib.* 3988, 3989

Explanation that when the coal is in full working there will be branches into the coal fields from the line from Bilaspur-Etawa, *Conway-Gordon* 5428—Inferior character of the Wardha coal, doubt as to the Hyderabad Railway being much required for its conveyance, *Rendel* 6013-6018—Advantage of the Bilaspur line in opening the Umeria or Rewah coal-field; particulars as to the quality and extent of this coal, *Hunter* 7154 7235-7240.

Reference by the Committee to the value of railway extension as regards the opening up of coal-fields, *Rep.* vii

Coke, Henry (Analysis of his Evidence.)—Long and intimate knowledge of India possessed by witness, who was for many years connected with the Public Works Department of Bombay, he represents the opinions of the Liverpool Chamber of Commerce in regard to Indian railways, 1251-1255

Information respecting the Engineering College at Poonah, of which institution witness may be called the father, statement that many of the natives who were trained there are now holding responsible positions as executive engineers and as contractors, 1253, 1407-1409 1506-1509.

Explanation that Liverpool is the port of import for the greatest amount of Indian produce, 1256-1257—Opinion that there would be an enormous increase in the export of Indian produce, if railways were more extensively constructed in that country, 1259.

Examination with reference to the great development of the wheat trade in India during the past five years, belief that if railway accommodation were extended, Indian wheat would compete in the English market with that of any other wheat growing country, 1260-1268. 1315-1331. 1395-1399. 1418 1422-1424. 1455-1458—Grounds for believing that an increased export of wheat would not tend to diminish that of other articles of commerce, 1266. 1395-1397.

Resolution passed by the Liverpool Corn Trade Association in favour of Railway extension in India, 1267—Contention that the Government in India should be the proper judges as to the proposed expenditure of fifty or sixty millions on railways; expediency of limiting the control of the Secretary of State over the Indian Government, especially in financial matters, 1269-1273 1400-1403 1427-1430. 1544-1550. 1554-1559

Consideration of the subject of raising money for the construction of Indian railways; assertion that the capital required cannot be raised in India, 1274-1280 1288-1290. 1334-1349. 1350-1363. 1368-1370 1392—Statement that the public in England trust the credit of the Indian Government much more than they do that of many foreign Governments in regard to investments, 1278-1280.

Coke, Henry. (Analysis of his Evidence)—continued.

Opinion that fifty millions in five or six years is a comparatively small sum for the London market to find, 1279, 1280—Conclusion that the construction of railways for protective or strategic purposes should be undertaken by the State; belief that works undertaken by the Government are quite as efficient and economical as those carried out by private companies, 1281-1283, 1404-1406

Inexpediency of enlarging to any great extent the Public Works Establishment; necessity in such an event of pensioning off, after a few years, a large number of engineers, 1283, 1406, 1425, 1426.

Examination with reference to the amount of control which it is expedient that the Government should exercise over the management and rates of private companies; feeling of the Liverpool merchants that it is a dangerous system to hand over the traffic of India to private companies without a firm hold being kept by the Government, 1285-1287, 1301-1306, 1371-1372, 1384-1391—Great advantage in the Government giving a permanent guarantee, so that they might thereby retain the necessary control over the companies, 1287, 1301-1302, 1334-1337.

Reference to the subject of loss by exchange as a difficult problem; question whether, if the taxpayers of India lose from three to four millions annually in remitting money to pay interest in this country, they do not, on the other hand, gain by the enormous increase of exports, 1291, 1340.

Information generally as to the gauge most suitable for Indian railways; indifference of the Liverpool merchants as to the particular gauge, so long as there is no break of gauge, 1292, 1308-1311, 1343-1349, 1413-1417, 1540, 1514—Absence of objection to the metre gauge upon feeder lines, or what may be termed local lines, 1294.

Opinion that the Rajpootana line, between Bombay and Delhi, should be made broad gauge, 1295, 1296—Expediency of the new line from Bhopal to Gwalior and Cawnpur being constructed on the broad gauge; grounds for this opinion, 1297.

Importance of the new direct route from Bombay to Calcutta, and Nagpur, being upon the broad gauge, 1297, 1300—Contention that it would be very bad policy for the Government to grant two railway companies permission to traverse the same country and to work against each other, 1307.

Grounds for the opinion that it would be well that all the metre gauge lines should be altered into broad gauge; belief that if this be done, the traffic will be largely developed, 1310, 1311—Approval of the management of Indian railways by military engineers, 1312, 1313, 1471—Expediency of the Government giving less or no extra Indian appointments annually to Cooper's Hill College; belief that this would be an inducement to pupils to go for the final competition, 1314, 1506-1509.

Explanation of the fact that the recent great fall in the price of wheat in England has not reduced the exports from India, 1315-1320, 1325, 1326—Favourable condition of the freight market as regards the import of Indian wheat into England, 1331-1333—Suggestions as to the best mode of inducing the natives of India to invest in the loans to be raised for railways, grounds for the opinion that interest at 4 per cent. would be quite sufficient to pay on a rupee loan in India with this object, 1350-1363.

Contention that the right of the Government to purchase the railways should be reserved whether they are or are not under a guarantee, 1364-1367—Statement that the reason for a Government guarantee of 4 per cent. to railways which would be sure to pay is, that it would protect the public from the payment of very high rates, 1379-1389.

Opinion that the natives of India are not quick to learn better modes of cultivation than they now possess, 1398, 1399—Importance of making purchases of iron for railway construction at the present time, because of its very low price, diminution also in the price of all other railway materials as well as of iron, 1410-1412, 1501-1507.

Information respecting other articles of produce besides wheat which would be exported from India in larger quantities owing to the development of the railway system; argument that there will be a very considerable increase of production in those districts which are not served by railways at all at the present time, 1419-1421, 1496-1500, 1528-1531—Belief that there would not be a very great development in the cotton trade, owing to the effect of the American crop, 1421

Enormous increase which would take place in the export of rice if the Burmah Railway were made, and if the export duty were removed, promise made ten years ago by the Secretary of State that this duty should be removed whenever the financial position of India would allow of it, 1421, 1448, 1449, 1526, 1557.

Additional evidence as to the means to be adopted for raising the capital necessary for the construction of Indian railways, desirability of establishing a system of open loans by which the people would have an interest in the Government which they would not have otherwise, 1431-1440, 1466-1470—Evidence in regard to the anticipated loss by exchange on account of the Government of India having to remit to Europe the interest upon the loans; argument that the natives of India are not affected in any way by loss

Coke, Henry. (Analysis of his Evidence)—*continued.*

of exchange, inasmuch as they consume only the articles which are produced in the country, 1441-1447. 1472-1489.

Examination respecting the lines which it is most expedient to construct with the object of tapping those districts which produce articles for exportation, contention that this is a question upon which the Government of India must furnish the best information, 1451-1454. 1459-1465. 1550-1553—Statement that the two trunk lines which the public are most anxious to see constructed are the Bhopal-Gwalior and Cawnpur Extension, and the direct line from Nagpur to Calcutta, 1452. 1459—Approval, upon general grounds, of extending the Great Indian Peninsular Railway to Cawnpur, but not on the terms already proposed by that Company, 1453-1455.

Additional information respecting the development of wheat cultivation in India; the increase of export between 1828-79 and 1883-84 has been from one million hundred weight to one million tons, 1490-1495. 1522-1526. 1532-1543—Conclusion that our import trade from India is to a large extent balanced by the exports of gold and silver from England to India, 1514-1521.

Comilla-Cachar Railway (Bengal) Length and cost of this project, as proposed by the Government of India to be left to private enterprise, *App* 530.

Companies. See *Administration and Management.* *Bengal Central Railway.* *Bengal and North Western Railway.* *Capital.* *Construction and Working.* *Cost of Lines.* *Expenditure.* *Guaranteed Railways.* *Private Enterprise.* *Southern Mahratta Railway.*

Compensation (Accidents) Very rare demands for compensation upon the Indian railways as compared with demands in England, explanation of the freedom from accident in India, *Rendel* 5709. 5726-5748. 5927.

Competition Improvement of railway competition were feasible in India, as in the United States, difficulties in the way, *See J. Card* 488-493. 513.

Contention that it would be very bad policy for the Government to grant two railway companies permission to traverse the same country and to work against each other, *Coke* 1307.

Explanation that the lower rates on other lines than on the Great Indian Peninsula is probably owing to the sea and river competition with which they have to contend, impossibility of introducing a line to compete with the Great Indian Peninsula, *Bythell* 2669-2674.

Wasteful competition which is carried on in England, which managers attempt to meet by providing increased facilities rather than by lowering the rates, belief that if the public had the choice, they would prefer the reduction of rates, *Rendel* 5755. 5867-5871—Entire absence in India of railway competition in the English sense, *ib.* 5760-5762.

See also *Construction and Working* *Guaranteed Companies.* *Private Enterprise.* *Rates and Fares.*

Connecting Lines. Opinion that in view of what has already been done the best course is to make new lines as occasion requires, the chief thing now required being to fill in cross lines between the main lines, *Strachey* 95-98—See also *Branch Lines or Feeders.*

CONDITION OF THE PEOPLE

Estimate by witness that the saving to the people of India from the construction of railways is probably twice the gross income of the companies, *Strachey* 355—Probable saving of from 30,000,000 *l* or 40,000,000 *l* by the people yearly, the cost of management having been reduced by at least one-third, *ib.* 355.

Success of the railways not only in improving the condition of the people of India but in conferring enormous advantages generally, without creating an increasing charge on the revenues of the country, *Strachey* 1186, 1187. 1194, 1195.

Extraordinary effect which railways have had in developing the resources and in increasing the prosperity of India, large increase in the rate of wages on account of the introduction of entirely new employments, *Chapman* 802-806. 876-878. 903-905—Strong opinion that the general condition of the people has been materially improved by means of the railways; example of this shown by the enormous hoards of silver ornaments brought to the Mint to be converted into rupees when the famine occurred, *ib.* 903-905.

An extension of railway would not only lead to a higher rate of wages but would materially benefit the condition of the country in every way, *Clarke* 2270-2273—Conclusion that apart from protection and relief from famine the extension of the railways has greatly benefited both the trade and people of India, *Lord* 2462.

CONDITION OF THE PEOPLE—continued.

Decided improvement of late years in the general condition of the natives of India; this improvement is due to a great extent to the railway system, *Hardy* 2899-2908—Assertion that although a railway may not show a large dividend to the shareholders it may still be an enormous benefit to the district and country through which it passes, *Birkmyre* 3443-3452. 3470, 3471.

Increased prosperity of the natives of India resulting from the introduction of railways; largely increased import of Manchester goods into India of late years, *Danvers* 7025-7027—Conclusion that the largely increasing exports of India form one indication of the increasing prosperity of the people, other reasons for considering that the prosperity of the country has materially increased, *Hunter* 7214-7216.

Concurrence of evidence as to the very beneficial operation of railways with respect to the condition of the people, *Rep.* vii, viii.

See also Cultivation of the Soil. Employment Exports. Extension of Railways. Native Capital. Savings Banks. Trade.

CONSTRUCTION AND WORKING

Construction of Indian railways hitherto by means either of money raised by the Government and expended through its own officers, or of a guarantee of interest to private companies who have thereby raised the money and carried out the lines, *Strachey* 9—Respects in which construction by the State is probably less desirable than by private companies, witness approving of the latter course provided economical construction can be secured, with a fair share of profits to the State, *ib.* 55 75. 92-94 253-264. 372-374

Disadvantage of Government construction of railways and other public works in so far as the progress is liable to interruption, works being sometimes suspended or delayed, enhanced cost thereby, *Strachey* 62-73—Doubt as to construction by Government being necessarily cheaper than by companies, *ib.* 93. 99-107. *

Illustration in the case of the South Mahratta line of the value of construction by companies rather than by the State, *Strachey* 374—Proposal that the companies should be in the light of paid agents of the Government, the construction being effected through them, *ib.* 1137, 1138.

Costly construction where lines have been guaranteed by Government, there being reason for much reduction, *Sir J. Caird* 389, 390.

Explanation that though all the superintendents are Englishmen and Scotchmen the whole of the actual work, including the construction of the largest bridges, is done by natives, *Glover* 1920-1922—Necessity in the case of Government works for witness to add 10 per cent. to his rates because of the obstruction met with from the executive engineers; assertion that in such a case the work would be very far from being better than if it were made for a private company, *ib.* 1927-1932 2112-2122—Enhanced cost by making the lines in dribblets, *Birkmyre* 3482-3484.

Advantages and disadvantages of construction by means of companies as compared with Government construction, *Conway-Gordon* 4292-4294. 4303-4305—Considerable disadvantages in the lines being worked by commercial companies; particular grounds on which India has practically suffered in this respect, *ib.* 4299-4301

Additional information as to the comparative advantages or disadvantage of contracts being carried out by companies, important consideration that the money having been once lodged, the construction goes on without fear of interruption, *Conway-Gordon* 4486-4504. 4644 4727-4729—Strong opinion that the rivalry which exists between lines laid down by private companies and those constructed by the Government is a distinct advantage both as regards construction and working, *ib.* 4501, 4502.

Conclusion that there are many advantages in making over the construction of lines to companies, contention however that there is ample room both for the companies and the Government, *Westland* 4928-4930.

Considerations as to the form of agency which is best to be adopted for making new railways in India, opinion that it is inexpedient that the Government should either make or work the lines, *Rendel* 5637-5643. 5828-5840. 5855-5869—Strong feeling that it is essential for the future of the railways that the freehold of them should be in the hands of the Government, the companies should construct the lines simply as contractors for the Government, *ib.* 5639-5643. 5693-5696.

Opinion that the Government with its large staff of trained engineers can build in a better and more economically than a company, *Ashtburner* 6364. 6450.

Expediency of employing companies as the agency for the construction and still more for the working of the proposed lines; grounds for this opinion, *Danvers* 6876-6877. 6879-6882. 6916. 6939-6942. 6982-6989. 6998-7002.

Reference

Report, 1884—continued

CONSTRUCTION AND WORKING—continued.

Reference to certain evidence as to the increased cost when the construction is slow, *Rep viii*—Value of the emulation between *quasi* private enterprise and Government working as tending to promote economical construction and management, *ib x*.

See also *Administration and Management*. *Cost of Lines*. *Engineers* *Expenditure*. *Extension of Railways* *Guaranteed Railways*. *Private Enterprise*. *State Railways* *Working Expenses*.

Contract System. State construction of railways by contract is being entirely given up as unsatisfactory, *Strachey 71*.

Conway-Gordon, Major, R E. (Analysis of his Evidence)—Large official experience of witness upon Indian railways both as regards the work and the finance of the Public Works Department, 3495—Special appointment of witness as delegate for State railways at the general conference on the subject of the interchange of rolling stock, 3495.

Information generally with reference to the proposals of the Government of India in regard to railway extension; intention to spend about thirty-three millions sterling upon railways during the next five years and to leave about twenty-four millions to be spent by private individuals or companies, 3496-3505 3518-3525 3527 3573-3576 3579-3584—Statement that as regards the lines left to be undertaken by unassisted private enterprise the Government will merely grant the land free of cost, 3499-3501—Favourable comparison of the proposed expenditure with the amount annually expended in previous years, 3506-3508 3518.

Statement prepared by witness explanatory of the financial position of the Government of India regarding railway expenditure, exclusion from these statements of the loss by exchange, 3508-3517, 3571, 3572, 3609 3619-3622 3641-3654—Special difficulties in the accounts of the Government of India, they being prepared on a different principle to mercantile accounts, 3509.

Policy adopted for many years by the Government of expending large sums annually on the material development of the country; considerable protection against famine by means of increased irrigation works, 3510—Statement that the Public Works Department has given the benefits of improved communication and all the requirements of modern progress at an annual charge 3*d*. per head of the whole vast population, 3511, 3512.

Anticipation that very soon the revenue produced from railways and irrigation works will enable the Government of India to carry on the whole public works business at an insignificant charge to the taxpayer, net charge to the taxpayer decreasing at the present time, 3513.

Explanation that there is now a smaller proportion of annual expenditure upon maintenance and repairs by the Public Works Department, and a larger expenditure upon new works for the material improvement of the country, 3514—Steady gain to the Government since 1881-82 on account of railways, 3521—Assertion that the proposed direct State expenditure will not affect in any way the balance of the general railway revenue or maintenance account, 3522, 3523.

Grounds for the conclusion that the increased expenditure will not add to the burden of taxation of the people of India, contention that the principle should be that the State expenditure on new works should be carried out so as to avoid imposing any further burden than is at present borne, 3526, 3527, 3539, 3557, 3561, 3562, 3570, 3620, 3625, 3626—Opinion expressed by the Government that they would consider increased taxation as a greater evil than slow progress in railway construction, 3526—Statement that the considerable increase to the Indian revenue under Land Revenue, Opium, Salt, Army, and all heads other than Telegraphs and Public Works will fully justify the proposed increase of expenditure upon railways, 3526.

Statistics of railway construction showing that the proposed average rate of 779 miles of new railways, annually, cannot be considered as a sudden increase of operations, 3526—Information with respect to the principles upon which the present proposals of the Indian Government are made, as regards the construction of new lines; stringent rules in force to secure investments in reproductive works producing at least as much as the interest paid on the amount borrowed, 3528-3536.

Contention on the part of the Government that the expenditure from ordinary and from borrowed funds must be considered together, 3531—Argument that the interest at 4 per cent which has to be earned on the whole of the productive public works expenditure forms in itself a sinking fund of a very material extent, 3531—Practice of the Government during the past few years to invest largely in railways and other reproductive works, which amply cover the amounts borrowed for other purposes, 3532-3536—Decided opinion that the proposals made by the Government are financially sound, 3536.

Conway-Gordon, Major, R. E. (Analysis of his Evidence)—continued.

Desire on the part of the Indian Government that the restrictions imposed by the Secretary of State as to the expenditure of borrowed money upon railways unless they produce 4 per cent. within five years should be relaxed; grounds for considering relaxation expedient, 3537-3539-3593-3607 3627-3631 —Contention that if the conditions as to productive railways as laid down by the Secretary of State had been in force, the East Indian Railway, which is the most successful financial work, could not have been constructed, belief that such conditions would also have excluded the construction of every other railway in India, 3538.

Argument that if branch lines were to be considered as revenue-producing lines on their own bases, the restrictions of the Secretary of State would prevent the construction of any branch line at all, 3534—Opinion expressed by General Strachey that these restrictions were the outcome of a policy which strove to arrest the expenditure on Public Works, 3538.

Information respecting the proposals of the Government of India in regard to altering the limits now fixed for direct borrowing on productive public works. Desire to increase the amount for railways alone, and not to alter that for irrigation purposes, 3540-3548 —Further proposal of the Government that the whole capital required for additions and improvements to the open State railways should be considered as outside the fixed limit, 3546-3548 —Strong opinion that as the Government intends to carry out a policy for improving the communications in India and of generally developing the country, every effort should be made to reduce the expenditure in other directions; belief that it is quite practicable to carry out this suggestion, 3549-3551.

Desirability that the limit placed on the borrowing powers of the Government should be elastic, and only put into practical operation in extreme cases; obvious expediency that the Government should have power to push on their works rapidly when money is cheap, 3551-3553. 3597. 3598—The one important point in regard to this limit should be, that the borrowing should never be pushed at such a rate as to injure the credit of the Government, 3553. 3594.

Great importance that the money to be expended should be laid out on the best paying lines, and that the first to be constructed should be those that were absolutely certain to pay, 3553-3558, 3569 —Suggestion that railway accounts should be kept entirely outside the general accounts of the empire, 3553. 3621, 3622. 3653, 3654—Decided opinion that if the railway business of India were exhibited in accurately kept commercial accounts, it would be shown to be at the present time a financial success, belief also that the lines generally will in the future pay still better, 3553-3556.

Moderate proposals of the Bengal Chamber of Commerce in regard to railways, 3560 —The proposals of the Bombay Chamber of Commerce go quite beyond reason, 3560 —Opinion that although the Bombay natives of India dislike our law and our system of land revenue, our roads and railways are decidedly popular with them, 3562, 3563, 3566. 3623, 3624—Complaint of the natives that the third-class fares are not sufficiently reduced to touch the poorest class, contention that these fares might be advantageously reduced still further, 3563-3569, 3655, 3656.

Belief that the natives cannot be induced to invest their savings in railways, as they can do much better elsewhere, instance, however, of a small line from Serafah, in the Hughli district, which has been taken up principally by the native clerks and engine-drivers, 3585-3592—Statement that the only possibility of getting railway shares taken up in India is through a syndicate, 3587.

Opinion that there is no country which bears such burdens in improving itself as India; heavy taxation borne at the present time for benefit of generations to come, 3609, 3610—Statement that there are laid out annually enormous sums out of revenue on capital account, 3618.

Disapproval that the power to limit the expenditure upon public works should be mainly in the hands of the Secretary of State in Council; it is impossible for an authority so far away from India to be certain of what is going on in that country, 3628-3631 —Statement that in the case of the enormous development of the wheat trade in India it was not foreseen by anyone in England, although it was clearly anticipated in India, 3629.

Further approval of the extent to which the Government of India propose the construction of railways; belief that the proposed expenditure is safe, and could be carried out with the existing staff, 3632-3640—Assertion that none of the lines recommended to be made are unlikely to pay if economically managed, 3638-3640—Opinion that the Government of India, if it errs on one point, errs on that of over caution, 3640.

Explanation that the loss by exchange in the railway accounts varies from year to year according to the fall in the value of the rupee, 3645-4647.

[Second Examination.]—Further opinion that the proposals of the Government of India with regard to the extension of railways are moderate; the average annual construction contemplated is 779 miles, 4022-4028—Explanation with further reference to the restrictions imposed by the Secretary of State in regard to the character of the lines

Report, 1884—continued.

Conway-Gordon, Major, R.E. (Analysis of his Evidence)—continued.

lines to be constructed, and the amount of interest to be earned, limits also imposed on the Indian Government as regards the amounts to be borrowed for public works, 4027, 4028, 4075, 4076, 4202-4231, 4286.

Information generally in regard to the proposed expenditure upon railways both by the State directly, and through the agency of private companies; conclusion that in the event of private companies not being found to undertake the works, it will become necessary for the Government to consider as to constructing the lines themselves, 4029-4056, 4107-4111, 4128-4135, 4183-4185, 4306.—Assertion that the expenditure in the next five years by the State will not be made in excess of the preceding period, if the whole expenditure upon public works be taken into consideration, 4052-4054.

Statement that the calculations of the Indian Government for the extension of railways are made in the hope of a continuation of profits, since 1878-79 there has been a steady increase in the ordinary traffic receipts, 4057-4069, 4102-4106.—Detailed statement in regard to the gross earnings on the trunk lines since 1866-67, showing a regular increase from year to year; entire absence of apprehension as to a disturbance of the Government scheme in consequence of a decrease in the earnings, 4059-4069.

Determination of the Government that there is to be no increased taxation for the purpose of obtaining money for the extension of railways, statements also that the borrowing for this purpose is not to be pushed so as to injure the credit of the Government, 4070-4074, 4262.—Strong desire of Government that the restriction in regard to the definition of productive works should be removed, expediency of permitting Government to borrow money for the construction of works which may not earn as much as 4 per cent., 4075, 4076.—Opinion that the principle laid down by the Select Committee of 1879 in regard to borrowing by the Indian Government was a sound one, 4077, 4312.

Circumstances under which witness was employed under a civil engineer upon his obtaining his first commission as a Royal Engineer under the old East India Company; explanation that his service has been entirely in India, and that he is a local officer, 4078-4081.

Statement as to the principles which have guided the Government of India respecting the character of the railways to be taken up by themselves, and of those to be constructed by private companies, proposals made by private contractors to make certain lines either with or without State aid, and to carry them on when completed, 4092-4101, 4116-4119.—Economic reasons which have led the Government to propose to purchase the Eastern Bengal Railway, 4092-4097.

Desire on the part of the Government to legitimatise the present expenditure, which in a sense was an evasion of the limit of 1879 (as laid down by the Select Committee), rather than to go beyond it, 4107-4111.—Exceptional instances in which lines which are not trunk lines are considered to be of primary importance, 4118-4125, 4123.

Argument that it will not be necessary to consider the question as to the pensions of the engineers, as the probability is that when the proposed railways are completed it will be necessary to construct others, 4124-4126.—Contention that the railway system should be extended so long as money can be spent with a fair prospect of return, 4126-4128.

Information respecting the railways proposed to be constructed by private companies with a limited guarantee; suggestions as to the proposals to be made by the Government to the guaranteed companies, 4128-4132, 4309, 4310.—Importance that the decision of the present Committee with regard to the amount of expenditure on railways should be so definite as to prevent any misapprehension in the future, 4136-4138.—Entire absence of any desire on the part of the Government that the expenditure of the Public Works Department should be removed from the control either of the Secretary of State or of that of the Financial Department of the Government of India, 4139, 4140, 4182.

Grounds for desiring that part of the famine fund which is now used for the construction of railways should be utilised as interest on capital borrowed to make other lines, contention that such a course would be financially sound provided that the construction of such lines reduced the cost of future famines, 4141-4157, 4186-4201, 4275, 4279-4287.—Explanation that as far as railways are concerned, it is the desire of the Government of India to abolish the existing distinction between protective and productive works, expediency of leaving the selection of non-paying works to the discretion of the Government under the control of the Secretary of State, 4158-4173, 4261-4267, 4277-4287, 4289-4291.

Further statement that including exchange the railways, on the whole, do now very nearly pay their way, 4174-4178.—Explanation as to the extent to which the views submitted by witness are those of the Government of India, or are his own, 4179-4181, 4232-4234.

Opinion that the Secretary of State unduly restricted the recommendation of the Committee of 1879, in regard to requiring that the money should be borrowed in India, 284

Conway-Gordon, Major, R E (Analysis of his Evidence)—continued.

belief that it would be wise at the present time to borrow in London the whole amount required for public works in India; 4243-4257—Assertion that the responsibility for the late borrowings in India and not in England rests entirely with the Secretary of State, 4246, 4247.

Statement that the estimates of revenue are most carefully examined by the Financial Department before the Government of India commits itself to any extension of railway works, 4263-4267—Indirect profit which a railway line produces from other sources than the railway itself, belief, for example, that the land revenue is increased, 4268, 4269—Impossibility of applying a hard-and-fast rule to all railways as to the particular stage at which they became productive, 4270-4274

Belief that there would be a pecuniary saving to the Government of India by making railways in time of famine, impossibility, however, to calculate exactly what such saving would amount to, 4287—Recommendation that the Government should be allowed to borrow money for the construction of railways, on the condition that no further taxation is imposed on the country, 4288—Statement that if the distinction between productive and protective works be abolished, the construction of railways can be carried on at a more rapid rate than at present, 4289-4291

Information with further reference to the advantages and disadvantages of construction by means of companies as compared with Government construction, 4292-4294, 4303-4305—Points on which the Government should be specially careful to guard itself in the case of future contracts with *guaranteed companies*; mistake in the past as regards the rate of guarantee, the terms of purchase, and the rate of exchange, 4295, 4303-4305.

Fatal blunder in the old contracts with guaranteed companies of laying down a fixed rate of exchange for all transactions between Government and this country, assertion that the Indian Government lose from 1 d. to 2 d. for every rupee the old companies spent in India, 4295.

Further explanation as to the comparative advantages and disadvantages of construction by the Indian Government 4295-4298, 4309, 4370—Considerable disadvantages in the lines being worked by commercial companies, particular grounds on which India has practically suffered in this respect, 4299-4301

Expediency of the Government retaining very much in its own hands a monopoly of the carrying of the country; grounds for this opinion, 4303, 4304—Important fact that had the Rajputana line been in the hands of a private company, it would have been impossible to stimulate the export trade in wheat, which was effected by the reduction of the rates on that line during last year, 4304—Doubtful expediency of giving over to private companies the lines that are likely to pay, while the Government retain only those that are not likely to be remunerative; belief that such a course is apt to discredit Government management, 4305

Statement of the causes of the disinclination of the English money market to invest in Indian railways without Government guarantee, 4307-4309—Contention that the whole history of Indian railways is one long unsuccessful attempt to get the lines constructed without a State guarantee, 4307-4309.

Few advantages in the system of limited guarantee, decided advantage in the case of continuous guarantee by which the Government would secure half profits over a certain rate of earnings, 4309, 4310—Importance of a purchase clause in the contracts with guaranteed companies which should give the Government power to take over the line on repaying the capital expenditure, 4310, 4311.

Examination respecting the control exercised by the Government over the rates and fares; large increase of traffic which resulted from a reduction of third-class fares on the East Indian Railway and on other lines on the 1st January 1882, 4313-4325, 4357-4368—Considerable difference of opinion which existed in 1867 between the Government of India and the Secretary of State with regard to the competency of the former to reduce the rates and fares, 4314-4319—Strong opinion expressed by Lord Mayo, when Viceroy, against maintaining the maximum fare for third-class passengers, 4317.

General increase in traffic in consequence of reduction of rates, 4322, 4323—Large increase in the revenue of the Indus Valley State Railway which has resulted from lowering the rates upon that line, 4323, 4324—Statement that there is no indication whatever that the reduction in the rates has reduced the net earnings in the aggregate of the railways in general, 4325.

Considerations as to the principle which should govern the question of gauge, strong opinion in favour of the standard gauge for all through lines, and for all short connections between existing broad gauge lines, 4326-4334, 4338-4344—Statement that the character of gauge depends entirely upon the amount and description of the traffic which may come upon the line, 4326—Uniformity of gauge adopted as a principle when railways were first started in India; circumstances under which a break of gauge was first permitted, 4327-4330.

Belief

Report, 1884—continued.

Conway-Gordon, Major, R. E. (Analysis of his Evidence)—continued.

Belief that when the narrow gauge was sanctioned, no one had any idea of the great development of traffic which would take place in India, official views at that time that the Indus Valley and the Rajputana lines would not pay, 4329, 4330—
Comparison of the tonnage of general merchandise carried by the guaranteed railways in 1868 with that carried in 1882, 4332—Large increase in the weight and size of the engines and waggons on the Rajputana line since it was first opened, 4334

Comparison of the cost of construction of the metre gauge and the standard gauge lines; the actual difference in favour of the former is from 1,500 L. to 2,000 L. a mile, inclusive of rolling stock in both cases, 4335—Favourable comparison as regard the cost of working the standard gauge lines, explanation that it is the cost of working and not of construction which affects the trade of India, 4336.

Compilation of the statistics of the working of Indian railways undertaken by the Railway Department of the Government; explanation that these statistics have not been specially prepared for the purposes of the present inquiry, 4337—Statement that the mercantile community in India is unanimously opposed to a break of gauge; desire also on their part for the broad, as opposed to the narrow gauge, 4339, 4340

Opinion that the two most important of all the lines proposed by the Indian Government are the Barakur-Nagpur, and the Bhopal-Jhansi-Gwalior and Jhansi-Cannpur lines, grounds for considering it expedient that these lines should be undertaken by private companies with a limited guarantee under Bengal Central terms, 4346-4365, 4371-4394—Considerable risk to the Bengal Central Company for the reason that directly the limit of the guarantee is over they are in the position of an ordinary commercial company, 4356-4364.

Decided opinion that the Government should keep in their own hands some control over the fares of the lowest class of passengers, and over the rates for agricultural and mineral produce, 4368, 4369—Statement that it is the deliberate belief of witness that the Calcutta and Nagpur will be a productive line, especially in view of the fact that the small section that has already been made has produced enormous receipts, 4375.

Character of the through traffic expected upon the line from Bilaspur to Seeterampur, on the completion of the line from Nagpur to Bilaspur, admission that at first there will not be a large local traffic, 4377-4386—Belief that the foregoing line to Seeterampur will induce a large amount of grain traffic to spring up between the Chattisgarh Division and Calcutta, opinion that the amount of traffic to Calcutta will be sufficient to justify a large expenditure, 4380-4391—If necessary the construction of the Nagpur and Bilaspur line should be undertaken by Government, that is, in the cheapest possible way, and on the broad gauge, 4392-4394

[Third Examination.]—Further statement as to the direct financial results of the transactions connected with Indian railways, grounds for the conclusion that the lines are now nearly paying their way even after allowing for the loss by exchange, 4395-4398—Argument that the loss by exchange and the cost of land are part of the capital charges borne directly by the Government, which should carry four per cent. interest against the working account, 4396—Reasons for believing that the financial results will be better in the future than they have been in the past, 4396.

Conclusion that it is the gradual improvement in the public works finances which has placed the Government of India of late years in so sound a financial position, removal by the Government of nearly the whole of the customs duties, and considerable reduction of the salt tax, 4396—Estimate that the lines proposed will pay from two to three per cent. above their working expenses, besides being useful for protection against famine, 4399, 4400.

Possibility in the case of new lines, where there is a contract with the Government for purchase, that the companies may wilfully default and so force the Government to take over unpaying concerns, example of this course in the Orissa Canal Company, 4401-4407—Statement of the terms upon which the Government have agreed to purchase the Bengal and North Western Company, if it be taken over, 4401-4405.

Further examination with reference to the control over the rates and tolls, great difficulty in adopting any system by which the Government can, fairly to the companies, maintain a control over the rates and fares, 4408-4415, 4419, 4420, 4453-4460, 4504-4546, 4616-4619—Opinion that the rates and fares prescribed by the Bengal Central Company, without any power of reduction by the Government, are injudiciously high, 4412-4416.

Additional grounds for considering it expedient that the Nagpur and Seeterampur and one or two other railways should be made by companies; belief that there are on the other hand considerable advantages in the working of the lines by Government instead of by companies, 4416-4420.

Further information relative to the advantages of the broad gauge for Indian railways, absence of economy in the narrow gauge, the question of expense being more a function

Conway-Gordon, Major, R.E. (Analysis of his Evidence)—continued.

of the weight of traffic than of the gauge, 4411-4452. 4461-4464. 4564-4579. 4592. 4593

Construction of the Rajputana line to Bombay on the narrow gauge universally acknowledged to be a great mistake; opinion that to alter the gauge now would be a very expensive matter, 4423-4425. 4441-4445.—Approval of the construction of a new line from Bhopal to Cawnpur rather than widening the gauge of the Rajputana line, on account of the former opening up a new area of country, 4426, 4426.

Statement that metre-gauge lines are more suitable for isolated parts of the country where a complete metre-gauge system can be adopted, 4438-4461-4464.—Grounds for preferring broad gauge to metre gauge for branch-feeder lines, 4449.—Contention that even for hilly country broad gauge lines are more advantageous than the narrow gauge, 4430-4439.—Engines repaired, but not made in India, rolling stock constructed in India, the ironwork being sent out from England, 4447-4452.

Further examination as to the reluctance of private companies to undertake the construction of railways in India without State aid, the chief grounds for this unwillingness are the mode in which the accounts are kept, and the want of information as to the terms to be granted by the Government, 4465-4468, 4580, 4591. 4599, 4591. 4627-4643. 4697.—Disapproval on the part of the Secretary of State in regard to a proposal made by the Government of India that the public should be informed as to the extent to which private enterprise would be encouraged, 4466.

Suggestion that the railway accounts should be kept upon purely commercial principles, and entirely outside the general accounts of the Empire, 4468.—Further grounds for proposing that the two important lines, the Bhopal-Jhansi and the Nagpur, should be made over to private enterprise, 4469-4472.—Statement that the larger part of the capital raised in India for railways is held by Europeans, 4475-4477. 4481-4483.—Large amount of Government paper in the hands of natives, upwards of twenty millions sterling being held in the year 1878; 4484, 4486.

Additional information as to the comparative advantages or disadvantages of contracts being carried out by companies; important consideration that the money having been once lodged the construction goes on without fear of interruption, 4486-4504. 4614. 4727-4729.—Statement that the Madras and the Gude and Kohilkund Railways may be considered as commercial failures; explanation that the failure of the Madras Railway was owing to the fact that it was so laid out that it avoided every town, 4493-4496.

Strong opinion that the rivalry which exists between lines laid down by private companies and those constructed by the Government is a distinct advantage, both as regards construction and working, 4501, 4502.—Expediency of not having the maxima rates fixed by the Government at an absolute amount; suggestion that the method should be that they should not exceed 10 per cent. in excess of the rates in force on the East Indian Railway, 4507-4515.—Statement that experience proves that a high rate of guarantee does not tend to lower the rates, but rather the contrary, 4526-4532.

Further opinion as to the advantages of a continuous guarantee at a low rate, as opposed to a limited guarantee; belief that money will not be obtained unless the guarantee be continuous, 4547-4563.—Desirability that the State should not earn more than the actual cost of the line, and that the profits of the railway should be only sufficient to pay the interests and the expenses, 4554-4559.—Argument that, in regard to guaranteed lines, the only practical plan upon which to proceed is that one district of country should pay for another, 4559-4663.

Opinion that the advantage of narrow gauge in respect of facility to get round curves, is but a small one, as these difficulties are being gradually overcome by scientific construction, 4564-4568.—Statement that to the north and east of the Gogra and the Ganges there must be of necessity a break of gauge, 4573.—Impossibility of transferring large waggons from one side of the Ganges to the other by means of ferry boats, on account of the frequent variations in the level of the water, 4574-4579.

Further information relative to the proposals of the Indian Government to apply the same fund for the purpose of guaranteeing the interest upon the railways, contention that this fund is simply intended to be an expedient for strengthening the financial position of India, 4582-4589.—Decided opinion that devoting the same fund to guaranteed railways would not lead to additional taxation, 4588, 4589.

Statement that the opinions of the Chambers of Commerce in regard to the estimates of probable traffic in the Indus Valley and on the Rajputana lines were more correct than those of the officials, 4594.

Additional examination as to the great importance of laying down a principle in regard to the adoption of broad or narrow gauge in certain parts of India; contention that this question should be seriously faced by the present Committee, and should not be left either to the Government of India or to the Secretary of State, 4595-4615. 4620-4624. 4645-4659. 4694. 4712-4716.—Instance of the Jhansi-Manickpur Railway as a good example of the difficulties resulting from the want of any principle as to the application of

Conway-Gordon, Major, R.E. (Analysis of his Evidence)—continued.

of the two gauges; deadlock in the construction of this line owing to differences between the Home Government and the Government of India on the question of gauge, 4595-4615 4620-4624.

Detailed statement of the differences generally between the Secretary of State and the Government of India on the subject of the two gauges, 4597-4615. 4620-4624—Explanation that when lines are converted from narrow to broad gauge the engines and rolling stock are transferred to other metre-gauge lines, impossibility of converting the rolling stock, 4613-4615—Expediency of giving the Indian Government liberty to adopt the broad gauge only, except in some isolated districts, 4625.

Strong opinion that the question of continuity of policy in regard to railway matters in India is the most important point which the present Committee has to deal with, 4644 4648-4651—Information as to the comparative costs of working the standard and the metre gauge lines, statistics showing that the working expenses on the narrow gauge lines are heavier than on the broad, 4653-4659 4717-4726.

Examination in regard to the difference in cost of transhipment on the Nagpur and on the Rajputana lines, extraordinary varieties in the amount of traffic upon these lines in different seasons, 4650-4693—Great importance in laying down definite principles on the question of gauge, a limitation of expenditure being insisted on, so as to exclude additional taxation, 4695-4701. 4731, 4732.

Expediency of a system of forecasts extending over five years in regard to railway expenditure, discontinuance at the present time of the forecasts instituted by Lord Northbrook, 4702-4708—Explanation that though the Indian financial Budget is in itself a forecast, it extends only over two years, 4703—Impossibility of naming off-hand the amount to be raised annually for railways without imposing additional taxation, 4709-4711

Grounds for the opinion that the Nagpur line should be on the broad gauge, 4712—Approval of converting the existing narrow gauge lines into broad gauge; contention that the expense would not be so great because the whole of the materials could be utilised on other narrow gauge lines, 4713, 4714.

Admission that the cost of construction, but not the working of narrow gauge, is more economical than broad gauge lines, 4715, 4716—Opinion expressed by the Government of Madras as to the absence of economy in the working of narrow gauge as compared with broad lines, 4723—Statement that the difference of cost of construction by the Government or by companies is very small, the question of economy largely depends on the efficiency of the engineering staff employed, 4727-4730.

Expediency, if the prosperity of Indian railways continues and allows larger expenditure without increased taxation, that discretion as to such expenditure should be left with the Government of India, 4731, 4732—Suggestion that if the Government are to share in the advantages of feeder lines, there should be inserted in the contracts a general clause that the companies should construct whatever branches may be required; the necessity of such branches should be a question of agreement between the company and the Government, 4733-4737.

Lower salaries paid to the Government servants than to those of the companies, willingness, however, of unemployed companies' servants to come to the Government at a lower rate, on account of the greater certainty of employment, 4738-4742.

[Fourth Examination]—Further information respecting the proposals of the Indian Government in regard to the extensions of railways, statement that the primary object held in view in drawing up Schedule A was to protect the whole of India against famine, 5363-5366. 5371-5386 5395-5402. 5409-5418. 5440-5443 5595-5599 5610

Statement as to the negotiations carried on with Messrs Hoare and Millar with reference to the construction of the Nagpur-Barakar line, postponement of this question by the Secretary of State until the decision of the present Committee, 5364. 5401-5406. 5485-5494—Diversity of opinion between the Government of India and the Secretary of State with regard to the difference in cost between the broad and narrow gauge construction on the Jhansi-Manickpur line, 5364 5432-5437.

Conclusion that the distinction between protective and productive lines is not a clear one; grounds for this view, 5367-5369. 5410-5423. 5493-5504. 5597-5608 5614-5619—Case of the Rewari-Ferozpur line, for which there was much difficulty in obtaining the sanction of the Secretary of State as a protective line, whilst it has since become a remarkably productive line, 5367.

Diversity of opinion on the part of officials with regard to certain lines as to whether they will be productive or not, 5369, 5370—Opinion that the line from Raipur to Visakhapatnam will not be a paying line on account of the inferiority of the latter port, statement, on the other hand, by the Collector of the Godavery District, that this is the

Conway-Gordon, Major, R.E. (Analysis of his Evidence)—continued.

most promising scheme which has been proposed for the south of India, 5369, 5370, 5375, 5384-5386, 5390-5394.

Several lines which at the present time are actually under construction, 5379-5374—Arrangement entered into by the Government with the South Mahratta Company for the construction of the Western Deccan line, 5375—Contention that the most unopened parts of India are exactly those which require railways, 5380-5383, 5407, 5408—Opinion of Sir George Campbell, when Chief Commissioner of the Central Provinces, that we should look rather for the development of traffic by the railways than to provide for an existing traffic, 5381-5383.

Opinion that the district of Oudh is at the present time fairly served by railways, 5397, 5398—Refusal of the Punjab Government to accept financial responsibility for a line from Umballa to Patiala, belief that if made there would not be much traffic upon it, 5399—Conclusion that the Jullundur-Hoshiarpur line, which is twenty-six miles long, would be exceedingly useful, 5400

Statement that the lines of railway now sanctioned and under construction amount to 1,779 miles, 5409-5411—Expediency of removing entirely the distinction between protective and productive lines; argument that each line should be dealt with entirely on its merits, 5419-5423

Belief that the construction of protective lines would have no tendency to induce the natives to rely unduly on the assistance of the Government in times of famine; the tendency, on the contrary, would be to encourage a greater extent of cultivation, 5424-5427, 5429-5431, 5557-5559—Explanation that when the coal is in full working, there will be branches into the coalfields from the line from Bilaspur to Etawa, 5428.

Statement that even during a famine year there is always more than sufficient food for the population, as a whole; assertion that it is only necessary to have railways to carry food into those districts where it is deficient, 5429-5431—Great deficiency of metal for making roads in the lower provinces in India, advantage in those districts of having short lines of railways upon the embankments which are prepared for the roads, 5432, 5439.

Examination in regard to the importance of developing the railways system, with the object of increasing the material prosperity of the cultivators; a great many more railways even than those now proposed will be required to fully develop the country, 5444-5455, 5469-5475, 5530-5532.

Belief that at the present time there is in India a large portion of waste land capable of cultivation; instance of this fact in the district between Multan and Lahore, which only wants a canal made through it, 5453, 5469-5474—Statement that although there has been lately a falling off in the traffic returns of the Eastern Bengal Railway, there is no reason to doubt that the traffic on Indian railways generally will increase, 5456-5459.

Information with regard to the large amount of exportable produce which might be brought to the coast if there were sufficient railway accommodation—Confident opinion that the wheat supply of India may be looked upon as a certain source of export, 5460-5468, 5510-5520, 5560-5583.

Further examination as to the practical necessity of a Government guarantee to induce private companies to take up the lines, preference, however, for pure private enterprise, and after that for the Bengal Central terms, 5476-5483, 5524-5526, 5534, 5535, 5552-5556, 5584-5596—Plan given by the Government to private companies free of charge in addition to detailed information respecting the districts through which the lines are to be run; actual expenses incurred in the surveys not given free by the Government, 5495-5498.

Grounds for the opinion that India as a wheat-producing country has largely the advantage of America, belief that in a war of rates America would entirely fail, 5521, 5522, 5541-5551—Strong opinion with regard to the present proposals that the burden on the taxpayer should, under no conditions, be increased, 5523, 5609.

Conclusion that one of the great objections to rupee loans is that the Government become competitors in the money market and so drive up the commercial rate, 5537-5539—Extraordinary examples of success in the case of the Indus Valley and the Rajputana lines, in regard to which there had been official denials of the possibility of traffic, and yet they have proved productive, 5540.

Desirability that the present Committee should express an opinion that the limit of expenditure upon railways laid down by the Committee of 1879 is no longer required, 5611-5613.

[Fifth Examination.]—Observations generally on the evidence given by Mr. Rendel, so far as it affects points raised by witness; general agreement, however, with Mr. Rendel's

Report, 1884—continued.

Conway-Gordon, Major, R. E. (Analysis of his Evidence)—continued

Rendel's views, 6718, 6719, 6842, 6843.—Difference of opinion with regard mainly to Mr Rendel's estimate as to the future traffic on Indian railways, 6718.

Further information respecting the difference in the cost of construction between broad and narrow gauge, belief that this is not so much as stated by Mr Rendel, 6718 6788-6834.—Grounds for advocating the construction of light lines on the broad gauge; argument that broad gauge, even though at a slightly increased cost, is preferable for the purposes of the expanding trade of the country, 6718 6812-6834. 6839-6841.

Explanation that the cause of the difference between Mr. Rendel's figures and those of the Government of India, in regard to the cost of working, is that the two sets of figures were got out on different bases, 6719.—Belief that the only trustworthy evidence regarding the disadvantages of a break of gauge would be that of the trade which uses the line, strong feeling against a break of gauge felt by the trade in the case of the Cardigan and Carmarthen and the Great Western lines in England, 6719.

Further information on the subject of the comparative cost of working upon broad and metre or narrow gauge railways in India, assertion that the cost of working locomotives on the metre gauge is considerably higher than on the broad gauge, 6720-6781 6785-6787, 6839-6841.—Statement that a comparison between the South Indian and the Madras lines is not an entirely fair one, because of the expensive management of the latter, 6737, 6738.

Belief that it is generally admitted that metre gauge lines work their passenger traffic with less dead weight than the broad gauge, as regards goods traffic, the dead weight is practically the same on both gauges, 6773-6781.—Great disproportion on the broad gauge lines, which the dead weight bears to the freight, on account of the antiquated character of the broad gauge rolling stock, 6781.

Explanation that the large difference between broad and narrow gauge, as regards maintenance, is materially affected by the age of the line, 6782-6784.—Statement that the lesser cost of the waggon and carriage traffic on the metre than on the broad gauge lines is to be entirely accounted for by the fact that on the narrow gauge lines the stock is all new, 6785, 6786.

Considerable effect which the weight of rails has upon the relative cost of broad and narrow gauge, 6789-6796 6810-6814.—Facility with which alterations could be made so as to enable heavy traffic to pass over a lightly constructed line, 6798-6800.

Contention that if light broad gauge, instead of narrow lines be constructed, there need be very little difference in the mileage opened in the next few years, opinion that with the present price of iron, the difference in cost would not amount to as much as 350 l. to 500 l. a mile, 6801-6805.—Diminution of one-half in the cost of iron rails during the past three years, 6806, 6807.

Statement that for light broad gauge lines there would be no increased cost for bridges, conclusion generally that the same bridges and the same rails will do for light broad gauge as for narrow gauge lines, 6815-6824.—Opinion that, upon the whole, 300 l. per mile would be an outside estimate of the difference in cost of construction between broad and narrow gauge, 6834.

Explanation that one of the main points in working a railway is that the locomotives should be kept out of the workshops as long as possible, belief that the same amount of haulage cannot be got out of a narrow as out of a broad gauge locomotive before it requires repairing, 6835-6838.—Disagreement with Mr. Rendel's view that the cost of conversion of the Nagpur and Chattisgarh Railway will be a million sterling, 6842.

Decided opinion that such railway statistics as were referred to by Mr. Rendel are of small importance, what is more wanted is an energetic traffic manager who is always up and down the line, 6844, 6845. 6851-6853.—The actual number of passengers carried over the East Indian Railway in the half year ending 30 June 1883 was 5,619,414, 6850.

Grounds for the opinion that the Government of India, if disappointed in getting companies to take up the proposed lines, will themselves borrow the money and undertake the construction, explanation that this course would not affect the financial position, it being a mere question of agency, 6854 6864.

Conway-Gordon, Major Papers and statistics submitted by Major Conway-Gordon in elucidation of his evidence on various points, *App.* 714 *et seq.*

Explanations in detail by Major Conway-Gordon in connection with Appendices showing the lines already specifically sanctioned by the Secretary of State, the lines either directly or indirectly approved by him, and the lines which have not as yet received either his sanction or approval, *App.* 853-920.

Cooper's Hill Engineering College. Expediency of the Government giving ten or twenty Indian railway appointments annually to Cooper's Hill College; this would be an inducement to pupils to go up for the final competition, *Coke* 1314. 1506-1509.

Cost of Conveyance. See Rates. Working Expenses.

COST OF LINES:

1. *Relative Cost of Broad and Narrow Gauge Railways.*
2. *Reduced Cost of Construction at the present time as compared with former Years.*

1. *Relative Cost of Broad and Narrow Gauge Railways.*

Belief that the cost is fifty per cent. less in the case of narrow gauge lines, *Sir J. Caird* 451. 497-499—Estimate of from 8,000 l. to 9,000 l. per mile as the present cost of making a broad gauge line, the cost of a metre gauge line being from 5,000 l. to 7,000 l.; much greater cost of the older lines, *Strachey* 1230-1238—Saving by the narrow gauge, as compared with the broad, in the proportion of 1,500 l. to 2,000 l. per mile, *Trevor* 1680-1683. 1782, 1783.

Information respecting the relative cost of broad and narrow gauge lines in various districts, statement that the cost of converting narrow into broad gauge would be almost as much as constructing a new line, especially as regards the bridges, *Glover* 1839-1844. 1933-1937. 1966, 1967. 1972-1978—Rough calculation that it would cost about 10,000 rupees a mile to lay down an additional rail so as to avoid the inconvenience of a break of gauge, 1974-1978

Strong opinion that the lines to be constructed should be on the metre, and not on the broad gauge; contention that there is a great aggregate saving in metre gauge as opposed to broad gauge lines, *Wood* 2283-2285. 2288, 2289. 2295—More economical cost of construction of narrow gauge lines, *Conway-Gordon* 4335. 4715, 4716—The cost is from 1,500 l. to 2,000 l. a mile cheaper in the case of the narrow gauge, *ib.* 4335-

Statement that, as regards expensive lines, the difference in cost of construction between the narrow and the broad gauge is exceedingly trifling, and need not be considered; marked difference in cost as regards the low-priced lines, *Rendel* 5624—Estimate that the cost of construction in the future of broad gauge lines will be about 6,000 l., and of metre gauge about 4,500 l. a mile, *ib.* 5624. 5675-5688. 5938-5948

Further information respecting the difference in the cost of construction between broad and narrow gauge, belief that this is not so much as stated by Mr. Rendel, *Conway-Gordon* 6718. 6788-6834—Considerable effect which the weight of rails has upon the relative cost of broad and narrow gauge, *ib.* 6789-6796. 6810-6814—Contention that if light broad gauge instead of narrow lines be constructed, there need be very little difference in the mileage opened in the next few years, opinion that with the present price of iron, the difference in cost would not amount to as much as 350 l. to 500 l. a mile, 6801-6806.

Statement that for light broad gauge lines there would be no increased cost for bridges; conclusion generally that the same bridges and the same rails will do for light broad gauge as for narrow gauge lines, *Conway Gordon* 6815-6824—Opinion that upon the whole 300 l. per mile would be an outside estimate of the difference in cost of construction between broad and narrow gauge, *ib.* 6834.

Statement showing annually for each railway in India the cost per mile open, *App.* 770-781.

Comparative statement (submitted by Major Conway-Gordon), showing the cost of construction of the several broad and narrow gauge lines, respectively, based on the capital outlay on 31st December 1882, *App.* 796, 797.

2. *Reduced Cost of Construction at the present time as compared with former Years.*

Greatly reduced cost of construction as compared with former years, *Sir J. Caird* 380-384—Average of 13,500 l. per mile as the cost hitherto of broad and narrow gauge lines, whilst the present cost would be hardly half so much, *ib.* 384—Favourable time at present for economical construction, *ib.* 398.

Advantage of the lower rate at which capital could now be raised for Indian railways than in 1878-79, whilst the cost of construction would be much less, *Sir J. Caird* 436-438—Prospect of considerable extension with financial success by reason of the much lower capital outlay required than in former years; average of 13,500 l. per mile as the cost of existing railways, whilst lines can now be made for less than half that amount, *ib.* 451, 462.

Statement that the cost of Indian railways is at the present time about one half of what it was formerly; one of the chief causes of this cheapness of construction is the decreased price of materials, *Chapman* 796. 800. 807-809. 836-844. 864-861. 937-939—Unusually low price of railway materials, especially iron, at the present time, *Glover* 1947 2191-2200. 2241, 2242—Very heavy increase in the cost of construction which

will

COST OF LINES—continued.

2. *Reduced Cost of Construction, &c*—continued.

will take place if the work be delayed until the prices of materials are much higher than at present, *Glover* 2081-2084.

Important saving in the cost of construction by the employment of competent and experienced engineers, *Dickens* 3048, *Conway Gordon* 4727-4730; *Rendel* 5652-5657, 5666-5671, 5721-5725, 5860-5863, 5961-5968—Opinion that the cost of construction of the old lines under guarantee was very much increased by the insufficiency of the Indian experience of the engineers employed by the Government, *Dickens* 3233-3237

Undoubted opinion that railways can be built very much more cheaply than when the East Indian line was made, the cost of the latter was about 22,000 l. a mile; whereas now a broad gauge line can be constructed at about 6,000 l. a mile, *Crawford* 3780, 3781.

Price of labour in India sent up by the extension of railway construction, explanation that notwithstanding the increased cost of labour the proposed new lines would not cost nearly as much as the guaranteed lines, *Westland* 4951-4955—Belief that railway materials, including rolling stock, were never so cheap as at the present time, *Rendel* 6005-6010

Opinion that in many cases a railway could be constructed at a less cost than an expensive road over a difficult soil, *Ashburker* 6519—Diminution of one half in the cost of iron rails during the past three years, *Conway-Gordon* 6806, 6807.

Statement by Mr Bell, Chairman of the British Iron Trade Association, as to the present time being very favourable for railway extension in India on account of the greatly reduced cost of iron and steel railway materials, &c., *App.* 647, 648.

Concurrence of evidence as to the cheapness of the materials used in construction, and as to the present being a favourable time for more rapid extension, *Rep.* viii—Facility to reduction of cost through the experience gained by the engineers, *ib.*

See also *Capital Construction and Working. Expenditure. Financial Results of Railways. Gauge. Guaranteed Railways. State Railways.*

Cost of Working See *Working Expenses.*

Cotton Belief that as a consequence of railway extension in India there would not be a very great development in the cotton trade, owing to the competition of the American crop, *Coke* 1421.

Statement that cotton is one of the largest exports from India, great advantage of railways in bringing the merchant into contact with the grower, *Lord* 2461, 2551-2559—Important fact that the Indian cotton competes on favourable terms with that raised in America, valuable operation in this respect of the railway which was constructed lately between Ahmedabad and Ajmeer, which brings cotton to Bombay instead of Calcutta, as formerly, *ib.* 2461, 2462.

Complaint that although India cotton is one half the price it was in 1869, yet the Great Indian Peninsula Railway Company are charging more for carriage than they did in that year, *Bythell* 2617-2620—Contention that the result of the high charges on the Great Indian Peninsula line will be that the cotton cultivation will be driven from India to America, *ib.* 2641, 2642.

Cotton Goods. Return of the quantities and value of cotton piece goods imported from foreign ports into each province of British India in each year from 1866-67 to 1882-83, *App.* 783.

Council of India. See the *Headings generally throughout the Index.*

Crawford, Robert Wigram (Analysis of his Evidence)—Witness, who is Chairman of the East Indian Railway Company, was formerly a member of one of the largest mercantile houses in Bombay; he represented the City of London in Parliament from 1857 to 1874, 3657-3659, 3943, 3944.

Strong opinion that the demand for a considerable extension of railways in India is not justified, and is very much exaggerated, grounds for this conclusion, 3660-3663, 3924, 3945, 3946—Abnormal character of the large export of grain and other articles from India within the last two years, which has led to this mistaken demand for increased railway accommodation, 3660—Belief that the public mind in this country is very imperfectly informed in regard to Indian affairs generally, 3662.

Statement that Bombay and Calcutta are the only two ports in India from which the products of the greater part of the country find their way to foreign lands; argument that these two ports are at present amply served by great trunk lines, 3662, 3663, 3919-3926—Strong opinion that all that is required is to develop and extend the trunk lines already made, assertion that physically there is not room for another trunk line into Bombay, 3664, 3744, 4019-4021.

Information generally with reference to the proposed line from Jhansi to Cawnpur; contention that there is no need for this line for commercial purposes, although it may

Crawford, Robert Wigram (Analysis of his Evidence)—continued.

be needed as a famine line, 3664, 3665. 3672-3681. 3754-3758. 3884-3897 3930-3933. 3945 3985. 3986.

Grounds for considering that a through line from Calcutta to Bombay, *via* Nagpur, is not required for the development of the resources of the country; the goods traffic between these two places is next to nothing at the present time, nor is there any indication of there being much in the future, 3664, 3665. 3685-3687. 3759-3769. 3934, 3935 3967-3969.

Impossibility for the Great India Peninsula Railway Company to compete on equal terms with the East Indian Railway in the event of a line being constructed from Calcutta to Bombay; detailed comparison of the rates charged by the two lines, 3664-3672 3674 3745-3753. 3782-3791. 3877-3882. 3950-3953

Disapproval of the East Indian Company being subjected to such a competition by the proposed new line as will compel the rates to be reduced to an unreasonable degree; admission, however, that the former company have now conditional power to reduce the rates, 3669-3672. 3782-3791 3816-3822 3850-3856—Considerable difference in the opinions of Mr. Glover and Dr. Hunter (the author of the *Universal Gazetteer of India*) on the subject of the fertility of the country between Jhansi and Bhopal, 3675-3677. 3857-3861. 3930-3933

Additional competition to which the Great Indian Peninsular Company would be exposed from the Rajputana, Bombay, and Baroda line, 3678, 3679—Great advantages which the port of Bombay possesses over that of Calcutta, especially in regard to the shorter voyage to all European ports, mercantile intelligence and enterprise also superior to that at Calcutta, 3682-3684. 3710-3716. 3728-3733 3737-3743. 3831-3838.

Larger facilities for conducting the trade from the interior of India to Europe through Bombay than through Calcutta, 3683—Strong efforts at Calcutta to keep up with Bombay in regard to appliances for the port; construction by the East Indian Railway Company of an embankment, 2,000 feet long, on the Hooghley, 3682, 3683 3710, 3711

Objection to the new scheme, *via* Nagpur, on the ground that it is an intrusion of the Bombay system into the East India system, it was a principle when the lines were originally allocated that one Presidency should not meddle with another in regard to railways, 3684. 3919-3926—Opinion, that a through line from Calcutta to Bombay would be of no advantage except for five or six passengers who would travel once a week, 3686.

Approval of the construction of a line from Kurni to Calcutta, as suggested by the Secretary of State, for the purpose of giving access to the coal deposits in the Rewah country, statement as to the good character of this coal and its estimated cost of production, 3687-3690 3768-3773 3824-3830 3954-3957 3987-3989.

Proposal that a former scheme of the East Indian Railway for a line from Mogul Seraj should be revived; explanation that if this line be made it will shorten the distance between Calcutta and Benares by seventy miles, 3691, 3692. 3774-3776. 3914-3918 —Calculation showing that an additional traffic of about 340,000 tons which would be carried by the proposed line from Mogul Seraj, would pay the interest upon the cost of construction, 3691, 3692 3717-3719

Grounds for the opinion that the principle of borrowing money in England for these undertakings, and so imposing a heavy addition to the liabilities of India, is altogether wrong, belief that there is in India a sufficient amount of money, and that it should be borrowed there, even though at a higher rate than in England, 3693-3695. 3720-3727. 3811 3815. 3834-3839—Suggestion that a loan should be issued in India, without the privilege of receiving interest in England in the form of bills of exchange, strong belief that this course would be successful in obtaining the money in India from wealthy natives, 3694, 3695

Explanation with reference to "State line terms" in regard to the working of small subsidiary lines or feeders; willingness on the part of the East Indian Company to take over on the Government terms any feeder lines which may be constructed on the same gauge as the East Indian, 3696-3709 3777-3779. 3797-3802 3823. 3840-3849. 3961-3966. 4007,4008—Difference of opinion between the Secretary of State and the Government of India in regard to the terms agreed to by the East Indian Company for working the feeder lines, 3697.

Statement that both the freight and the insurance from Calcutta are higher than from Bombay, 3712-3716 3728-3733. 3948, 3949 —Quantity of goods and minerals carried by the East Indian Railway in the half year to the 30th June 1883; the total amounted to 2,615,000 tons, 3717-3719—Statement that four to four and a half per cent. loans were taken up readily by natives in former times, 3723, 3724.

Crawford, Robert Wigram. (Analysis of his Evidence)—continued.

Belief that the greater portion of the wheat from the Gangetic Valley has of late years gone to Calcutta rather than to Bombay, 3734-3736—Absence of competition between Calcutta and Bombay in regard to the export trade, very large competition between these ports in conducting the import traffic, 3741.

Impossibility of making an efficient port at Surat on account of the large size of the vessels of the present day, 3744—Great advantage possessed by the East Indian over the Great Indian Peninsula Company as regards the price of coal, the cost to the former company is at the rate of 1 *d* per ton per mile, whilst to the latter it is from 5 *d*. to 6 *d*. per ton, 3745, 3746. 3950-3953. 3957

Belief that the new line which is in course of construction from Jhansi to Mannickpur will partially serve the purposes of a famine line through that district, 3754-3758—Opinion that the greater part of the grain carried on the Great Indian Peninsula is wheat; statement that Bombay habitually imports rice, inasmuch as there is not enough for ten days' consumption in the whole of the Presidency, 3761-3767

Expediency of investigating the question of a line from Bilaspur to Calcutta, as the country through which it runs is so very little known, entire absence of justification for a railway at the present time in that district, so far as local traffic is concerned, 3768, 3769—Opinion that a line in connection with the Rewah coal field worked as a State line would pay its expenses, 3770, 3771—Desirability of a line from Halpi to Cawnpore, which would be very inexpensive, as the country is quite flat, without waterway, 3777-3779

Undoubted opinion that railways can be built very much more cheaply than when the East Indian line was made, the cost of the latter was about 22,000 *l* a mile, whereas now a broad-gauge line can be constructed at about 6,000 *l* a mile, 3780, 3781—Loss of about 3,000,000 *l*. to the East Indian line during the mutiny by the removal of 17,000 tons of rails, 3780.

Explanation in regard to the contract between the East Indian Railway and the Government as to the settlement of the rates and fares, impossibility for the company to reduce the rates without the sanction of the Government, 3782, 3791 3816-3822—Statement that the first class fares on the Indian railways pay absolutely nothing in proportion to the rest of the traffic, 3792—Probability that if the third class fares were reduced further than they are at present it would entail large expenditure upon rolling stock on account of the increased numbers that would use the line, 3793-3796 3819-3822 3850. 3856.

Decided opinion that the arrangement between the Government and the East Indian Railway is an exceedingly good one; the company acts as contractor for the Government, and is bound to defer to them as the owners of the line, 3797-3801 3823—Appointment of the directors of the company by the shareholders, and not by the Government, 3802-3804.

Belief that there would be very great difficulty, if it were attempted, to place the State railways under the management of a trust similar to that of the port of Calcutta or Bombay, 3805—Explanation of the means adopted by the East Indian Company to establish a staff of engineers of regular grades of service and salaries, decided objection to the system of competition as regards the appointment of junior engineers, 3806-3810.

Provident fund established by the East Indian Company, to which the officers contribute part, and the Government and the company provide one per cent out of the surplus profits beyond five per cent, 3808, 3809—Statement that the development of Bombay means development of the direct continental trade with India, and less trade going through England, 3831-3833.

Witness submits that the proposal to spend, from fifty to sixty millions sterling upon railways in India during the next five years is enormous, unnecessary, and uncalled for, 3861, 3862.

Statement that, assuming the Bhopal and Gwalior line were made, the tendency of the traffic below Agra would still be to Calcutta, entire absence in India of any system of running powers or facilities affecting particular traffic, 3862-3876—Belief that the only means of affecting the current of traffic one way or another would be by means of advertisements, 3876—Disapproval of a break of gauge as between a feeder and a trunk line, the decision as to the gauge of the proposed line from Kisi to Calcutta to remain with the Government, 3887-3897. 3967, 3968 4007, 4008.

Information with further reference to the relative merits of the ports of Bombay and Calcutta, contention that for every reason Bombay must remain always the best port of India as regards Europe, 3898-3909 3948, 3949—Argument against the concentration of railways into Bombay rather than into Calcutta, for the reason that Calcutta has a large and growing business with the Australian Colonies and China, which must be considered, as well as that of Europe, 3902-3904.

Crawford, Robert Wigham. (Analysis of his Evidence)—continued.

Additional assertion that there is an exaggerated importance attached to the construction of a through route between Calcutta and Bombay; contention that the local traffic, between these places is a totally distinct matter from the through traffic, 3910-3913—Admission that although the intrusion of Bombay railways into the Bengal Presidency would be opposed to the existing principle, still such intrusion would do no harm to the people of India, 3921-3926—Assertion that the Nagpur line to Calcutta would be too expensive, especially as it must cross five immense rivers in its course, 3934, 3935.

Further examination as to the expediency of raising the necessary funds in India for the projected railways, rather than in England; argument that the present generation are not justified in getting advantages at the expense of the future by the accumulation of a debt year by year against the natives of India, 3936-3942, 3970-3979.

Opinion that though the Bhopal and Gwalior line should be sanctioned, it should not be guaranteed by the Government at the expense of the people of India, 3945, 3986, 3980—Impression that the coal lately obtained from Wansera is of inferior quality, and the supply inadequate, 3955, 3956.

Conclusion that in forcing competition on the East Indian Company, the Government are to be blamed for jeopardising the interests of the line in which they themselves have a large stake, expediency of the Government going beyond their contract with the company in this matter, 3958-3960—Decided opinion that, regarding the interests of India, there is too much money being borrowed on her account, 3974-3976—Entirely different principles which govern the circumstances connected with loans to India and loans to America or Australia raised in England, 3973, 3976-3979.

Circumstances under which the Government of India objected to the reduction of the rates on the East Indian Railway, 3980-3984—Coal carried by the East Indian Railway to Jubbulpore for the use of the Great Indian Peninsula line, carriage of the coal only charged, as the coal fields do not now belong to the company, 3988, 3989—Uniform rate for carriage charged by the East Indian Company equal to four-tenths of a penny per mile, belief that on the new line from Kutta the rate will be about the same, 3990-3993.

Great advantage of the control which the Government exercises over the East Indian line; expediency of extending their control to other lines when the contracts are brought to a conclusion, 3994-4002—Desirability for the Government in the future to establish lines on similar terms to those arranged with the South Mahratta Company, 3996-4000.

Identical terms made originally by the Government with the East Indian and Great Indian Peninsula companies, subsequent contracts made with other companies followed the lines of the earlier ones, 4000—Large improvement which has taken place in the finances of the railways since 1872; 4003-4006.

Information respecting the proposed line from Jhansi to Mannickpur; considerable expense in regard to the coal traffic on account of the difference in gauge between that line and the East Indian, 4009-4018.

[Second Examination.]—Paper handed in by witness showing the practical working of the East Indian Railway since the 1st January 1880; reference hereon to the testimony borne by Mr Danvers to the good working of the line, 7436-7438.

Cuddapah-Nellore Railway. Particulars respecting this line, as proposed by the Government of India in January 1883, *App.* 524-532.

Documentary evidence submitted by Major Conway-Gordon showing the views of the Government of India, and of the Madras Government, in favour of the construction of this line; approval on the part of the Secretary of State, *App.* 874-876, 919.

CULTIVATION OF THE SOIL:

Effect of the extension of railways in inducing more wide-spread cultivation, and in increasing the obligation to take effectual steps for the relief of famine, *Strachey* 275-278—Effect of the railways in increasing the product of the soil, but not in directly enhancing the amount of the land revenue, *ib.* 353-355.

Better position of India for resisting famine the more she is induced to grow rice, wheat; &c., by an increased foreign demand, *Sir J. Card* 413—Extremely good cultivation in many parts of India; witness has seen some admirable cultivation of tobacco and sugar cane, *ib.* 564, 565.

Extensive tracts of country brought into cultivation by railways passing through them, *Chapman* 803—Opinion that the natives of India are not quick to learn better modes of cultivation than they now possess, *Coke* 1398, 1399—Conclusion as to the increased cultivation and produce as a result of railway extension, *ib.* 1419-1421, 1495-1500, 1528-1531.

Important influence of railways on cultivation in the districts through which they pass; absence of desire on the part of the natives to raise more grain than they require for themselves

Report, 1884—continued.

CULTIVATION OF THE SOIL—continued.

themselves when they have no means to take it to a market, *Glover* 1890 1905, 1906. 1944, 1945. 1949-1951. 1962-1965. 2134 2153. 2163-2166. 2247-2251 2671-2675 —In those districts in India, which can never be cultivated, witness would not advise the construction of a railway, *ib.* 2158—Enormous increase in the cultivation in the district between Nagpur and Bhusawal since the construction of the great Indian Peninsula line, *ib.* 2247-2249.

Grounds which amply justify the Government in making new railways to a great extent; statement that there are nine million acres of land in the Punjab which would probably be brought into cultivation if railways were made, *Bythell* 2607-2610 2614. 2704-2710.

Examination in regard to the importance of developing the railway system, with the object of increasing the material prosperity of the cultivators; a great many more railways even than those now proposed will be required to fully develop the country, *Conway-Gordon* 5453. 5455. 5469-5475. 5530-5532—Belief that at the present time there is in India a large portion of waste land capable of cultivation; instance of this fact in the district between Mooltan and Lahore, which only wants a canal made through it, *ib.* 5453. 5469-5474

Extensive districts where the culture of grain would be very much stimulated and increased by the construction of railroads; vast portions of the country that are not within reasonable distance of any line at the present time, *Rendel* 5662-5665 5975-5989

Advantages which have accrued to India from the extension of the railways, large districts of jungle which have of late years been brought under cultivation as one of the results, *Ashburner* 6348-6350. 6417-6420 6425-6429. 6520-6525—Extensive districts available for cultivation in the Deccan, *ib.* 6525.

Information respecting the large quantity of land in India which though cultivable is not at present cultivated, great influence of railways in increasing cultivation, *Hunter* 7161-7164. 7170. 7241-7244.

Tendency of the stimulus of high prices to induce the people not merely to substitute wheat for less remunerative crops, but also to improve their crops and to extend the area of cultivation, *Rep.* vii.

See also *Condition of the People. Cotton. Gram. Wheat.*

Cunningham, H. S. Minute by him in January 1884, as a member of the Famine Commission, relative to the productive character of certain lines; importance attached to their rapid construction, *App.* 578-580

D.

Dacca-Mymensingh Railway Estimated cost and results of this line; progress being made with its construction, as in January 1883, *App.* 525. 532.

Documentary evidence submitted by Major Conway-Gordon respecting this line, as proposed by the Government of India, its advantages, estimated cost, &c.; sanction given by the Secretary of State, *App.* 915-917. 919.

Dalyell, R. A. Views of R. A. Dalyell, concurred in by Frederick James Halliday, as contained in Minute of 18th August 1883, respecting the policy to be pursued in the extension of railways, and the giving of guarantees, *App.* 620, 621.

Damacherla-Vellore, &c. (Madras) Documentary evidence, and extracts from official correspondence, respecting the proposed construction of this line, and its advantages; sanction not yet given by the Secretary of State, *App.* 876 920.

Danvers, Juland. (Analysis of his Evidence).—Witness is secretary in the Public Works Department at the India Office, and also Government Director of the Guaranteed Railway Companies, he visited India and went over all the railways in the year 1875-76 6865. 6965-6966

Information generally respecting the cost and working of the railways, opinion that the results of the working are very encouraging, as showing improved returns and an expansion of traffic, 6866-6870. 6906-6915. 6931-6939. 6969-6971—Extent of railways now in process of construction, 6869.

Strong opinion that a more rapid extension of railways is desirable, if it be carried out judiciously, expectation that an expansion of the railway system will have, for various reasons, most beneficial results, 6871. 6873. 6887. 7016-7027—Expediency that any future expenditure upon railways should not in any way involve increased taxation; belief that there are no districts in India where increased taxation can be borne by the people, 6872. 7005. 7023, 7024. 7038. 7071.

Danvers, Juland. (Analysis of his Evidence)—continued.

Information as to the means to be adopted for raising money for the construction of new lines; expediency of borrowing as much as possible in India, 6872. 6874. 7028-7050. 7072-7075—Desirability of leaving the Government to exercise its own discretion as to borrowing, 6872.

Approval of the Government giving a limited guarantee on the best terms that can be obtained; expediency, nevertheless, of a permanent guarantee, if it be necessary, to enable railways to be carried out extensively, 6872. 6898-6905. 7010-7015—Opinion that the proposals of the Government of India in regard to the construction of railways are reasonable, and that they can be carried out without inconvenient financial pressure, 6873 7076-7079

Grounds for considering it desirable that forecasts of railway construction should be made every year, embracing estimates for the five succeeding years, 6873. 7072—Approval of the Government giving to private companies similar terms to those of the South Mahratta Company, in the case of lines which are not expected to be remunerative, opinion that the same terms should be granted to famine lines, 6874 6885. 6900. 6901. 6942-6961 7083-7106—Suggestion that the terms of the Bengal Central Railway contract should be given in the case of lines which are likely to pay, 6874. 7082, 7083. 7085-7090.

Expediency of employing companies as the agency for the construction, and especially for the working of the proposed lines, grounds for this opinion, 6875-6877. 6879-6882. 6916 6939-6942. 6982-6989. 6998-7002—Statement that the working of the East Indian Railway by a private company has led to the very best results, 6876.

Suggestions generally as to the best course to be adopted for encouraging private enterprise for the construction of new lines, great importance of a comprehensive Railway Act of the Indian Legislature similar to the "Companies Clauses Consolidation Act," 6878. 6880-6882 6884-6886. 7080-7103—Advocacy of the appointment of a small railway commission as a tribunal for the settlement of disputes regarding rates and other matters, 6878. 6917-6922.

Belief that a time will come when railway enterprise will be attracted to India from England without the aid and support of Government, 6879 7089—Desirability in future contracts that the present onerous terms of purchase by Government should be avoided, 6882—Probability of the lines being remunerative in the future if they are constructed economically and managed skilfully, 6883 6931-6933—Increase of the Land Revenue resulting from the construction of railways, 6887. 7021.

Opinion that the gauge of each future line should be determined according to its special circumstance; expediency of having the chief trunk lines constructed upon the broad gauge, 6888 6893, 6894—Desirability of reducing the rates and fares to as low a point as is compatible with fair profits, suggestion that the rates should be regulated by legislative enactment as is done in this country, 6889-6891. 6923-6929. 6993-7002.

Great importance of the line from Calcutta to Nagpur, which should be constructed as cheaply as possible, 6895, 6892—Decided opinion that the Bhopal, Gwalior, and Cawnpore Extension should be on the broad gauge, contention that this line is of such importance that it should be undertaken at once, 6895-6897.

Explanation as to the cost of the Central Bengal line being so much less than that of the Eastern Bengal; large and difficult bridges which were necessary on the latter line, 6908-6913—Direct control possessed by the Government over the rates of the East Indian Railway down to a certain minimum, 6928, 6929.

Contention that although the Government have taken over some lines at a small premium, it does not prove that the lines would have been managed better had they been undertaken in the first instance by the Government, 6940-6942—Statement of the advantages which would result from employing a company under the terms of the South Mahratta line, 6957-6962

Information respecting the antecedents of the directors connected with Indian railways, 6962, 6964—Desirability of allowing existing companies to construct some of the proposed new lines, especially these in connection with their own railways, 6983-6986.

Further examination in regard to the results of the working of Indian Railways, contention that it is fair to look to the profits on existing lines as a source from which interest may be paid on the capital for future lines, 7003-7009. 7016-7027. 7058-7068—Belief that a guaranteed interest of 3½ per cent. ought to be sufficient to induce capitalists to make the railways, provided that they were allowed to increase that interest by surplus profits, 7010-7015.

Increased prosperity of the natives resulting from the introduction of railways; largely increased import of Manchester goods into India of late years, 7025-7027—Argument that the famine lines while mitigating famine and saving life, will also help to increase produce as well as exports, opinion that the Government for this reason should raise money in this country at a low rate of interest for the purpose of making such lines, 7041, 7042. 7051-7057.

Explanation

Danvers, Juland. (Analysis of his Evidence)—continued

Explanation that if within the five years forecast some accident occurred to interfere with the revenue the expenditure on State works would have to be suspended; if, however, the engagements were with companies the works would go on as usual under their contracts, 7072, 7073—Belief that the shareholders would not object to the principle of dividing profits in the event of further guarantees being given by the Government, 7080-7090.

Opinion with reference to the South Mahratta terms that if the payment of interest were made a sterling instead of a rupee transaction the security would be more acceptable to the public, 7091-7095—Contention that the Government should not pay interest upon any excess of guaranteed capital which it might be necessary to raise by the companies, expediency of the guarantee being strictly limited, and the risk thrown on the company, 7099-7103—Explanation of the terms by which the Government are bound to the South Mahratta line for twenty-five years, 7104-7106.

Debentures (Guaranteed Capital) Desirability that as much as possible of the capital of guaranteed lines should be in the form of debentures; grounds for this opinion, *Westland* 4771. 4855-4858. 5022-5027

Debt of India. Dis-advantage in the required railways being constructed by the State, on account of the large increase thereby to the debt of India, *Strachey* 1101-1108 1126.

Statement of the outstanding debt of India, distinguishing between ordinary debt and debt on account of productive public works, in each year since 1870; *App.* 623—Total of 161,297,803 l. in 1884, *ib.*

Amount of annual reduction of debt since 1881-82, *App.* 663—Statement showing the amount of debt incurred or discharged in each year since 1867-68, *ib.* 696, 697

See also *Financial Condition of India Loans.*

Deccan See *Bombay. Western Deccan Railway.*

Delay. Recommendation by the Committee that negotiations respecting new lines should be conducted as expeditiously as possible, so as to avoid all unnecessary delays in arranging contracts, *Rep.* xi.—See also *Extension of Railways.*

Dharmavaram District Statement showing the area, population, and loss of population, during the famine in this district, *App.* 687.

Dhond-Mannad Railway. Return showing for each year the mileage, average age, cost, and general results of working, *App.* 778.

Dickens, Lieutenant Colonel, C B. (Analysis of his Evidence.)—Witness was thirty-eight years in India, during several of which he filled the office of Secretary in the Public Works Department, he is now Chairman of the Bengal Central Railway, 3044, 3045.

Conclusions generally as to the expediency of extending the railway system in India, suggestions with reference to the mode to be adopted for deciding as to the annual scale of expenditure upon the works, 3046-3048, 3055-3064, 3110-3124, 3151-3177 3212-3215 3225-3232—Opinion that the present state of Indian finances quite justifies the expenditure by the Government of a much larger amount than that recommended by the Parliamentary Committee of 1878-79, 3046-3048.

Advisability of preparing a forecast of operations in regard to railways, which should be revised from year to year, uniformity in the rate of outlay is very important towards cheap construction, 3048 3063-3178—Belief that the most rapidly remunerative outlay would be on the feeding-branches to existing lines, though the branches might not pay in themselves, they would pay in the traffic which they would bring on the main lines, 3048 3117-3124 3167

Great importance that the railway works should not be expensive, a large element in cheap construction is a sufficient proportion of engineers having Indian experience, 3048—Disagreement with certain evidence to the effect that much inconvenience and loss have been caused by the want of experience on the part of railway engineers appointed by the Government, 3049-3054—Opinion that the amount which could judiciously be laid out annually upon railway extension might amount to something between three and five millions, 3055.

Strong approval of the new railways being constructed partly by the Government and partly by companies with Government guarantee, expediency of giving the Government establishment paving as well as non-paying lines, with the view of keeping it efficient, 3058-3060, 3064, 3065, 3168, 3169 3212-3215—Decided opinion that there is great scope for the extension of railways in India, on the condition that economy is exercised in the construction, 3061, 3059.

Suggestions generally as to the steps which ought to be taken for the purpose of obtaining capital for the schemes, opinion that to make sure of floating new companies there should be a Government guarantee of four per cent., 3065-3077 3183-3186 3225-3228 3238-3249, 3258-3270—Advisability in regard to railways that are not likely

Dickens, Lieutenant Colonel, C.B. (Analysis of his Evidence)—continued.

to pay more than four per cent. of adopting similar terms as have been given to the South Mahratta Company; permanent guarantee of three and a-half per cent., and a half per cent. temporary guarantee for seven years, given to this company, in addition to one quarter of the total net earnings, 3066-3073 3313.

Opinion that the existing contracts with guaranteed companies, by which they are enabled to debit rupees at a fixed value of exchange, has been a disadvantage to the Indian Government; expediency of the Government securing itself in the future by making the guarantee dependent on the exchange, 3078-3085—Explanation with reference to the arrangements made by the Government in the case of the Bengal Central Railway, which is a broad gauge line; considerable premium which the shares of this company now realise in the market, 3086-3091. 3099, 3134-3139. 3190, 3191. 3216-3219—Further approval of the Government giving a permanent guarantee and claiming a share of the annual profits, 3092.

Statement as to the terms made with Government by the Bengal and North Western Company, which is a narrow gauge line, entire absence of guarantee in the case of this company, the shares of which are at present at a considerable discount, 3093-3097. 3190-3196. 3221—Estimate that the cost of the Bengal Central line will be about 6,000 *l* a mile, and that of the Bengal North Western 4,500 *l* a mile; contention that these two lines form the basis of a fair comparison of the cost, as between the metre and the standard gauge, 3106-3109 3197-3211.

Opinion that the former action of the Indian Government in discharging a large number of engineers was inexpedient; approval of increasing this staff at the present time, 3125-3133. 3140-3150. 3271 3285-3287—Belief that the Bengal Central line is the only one in India with a guarantee during construction, which is to cease after the line is completed, importance that a company should be assured of its ultimate success before they consented to terms of this kind, 3135-3139.

Statement that for various reasons there would be greater difficulty for the Government to engage engineers than would be the case as regards private companies; expediency, if these difficulties can be surmounted, for the Government to engage these officers on the same terms as the companies would do, 3140-3150.

Desirability of constructing a main line from Chittagong into Cachar, possibly to be ultimately extended to Assam; belief that such a line would pay if it were chiefly made, 3151-3156—Doubtful opinion as to the financial prospects of a line from Nagpur to Calcutta, 3159, 3160.

Opinion that the selection of the line from Bhillâspur through Saugor and the newly discovered coalfield of Rewah is not a very good one, 3161-3162—Belief that the proposed line from Cawnpore to Bhopal ought to pay on account of the through rather than from the local traffic, 3163-3166.

Great importance in the employment of engineers that they should possess large Indian experience as well as a knowledge of technical engineering, 3179-3182. 3233-3237—Inexpediency of placing Indian railways under the management of public bodies similar to port trusts in India, 3187-3189—Comparison of the relative cost of the broad and narrow gauge, including rolling stock and stations; this is about as 1,500 *l*. to 2,400 *l*. in favour of the narrow gauge, 3197, 3198 3222-3224.

Statement that at the present time there is a growing revenue from railways, which growth may be calculated to go on, 3231—Opinion that the cost of construction of the old lines under guarantee was very much increased by the insufficiency of the Indian experience of the engineers employed by the Government, 3233-3237.

Further evidence and suggestions respecting the construction of railways by means of companies under a guarantee, expediency of the Government giving a perpetual guarantee of 4 per cent., 3238-3251. 3258-3270 3290-3304—Absence of difficulty in obtaining at any moment a sufficient staff of competent engineers for railways so long as the amount of construction is kept within moderate limits, 3271-3274—Approval of a training college for the education of young men, as engineers, Government having the advantage of their services at a moderate remuneration, 3287-3289.

Strong opinion that the Government of India cannot rely upon public companies to supply any large amount of capital except with a substantial guarantee, 3305-3308. 3311-3317—Expediency of Government, in the interests of the people of India, keeping a large portion of the profits of railways and not giving them all over to the companies, 3305.

Populous country with large produce through which the Bengal North-Western Railway runs, 3309, 3310—Great advantage in the system of supervision and audit now in operation, which tends to prevent waste of money, such as existed in the case of private companies in former years, 3314-3317.

Statement that the lines which pay best are those which rely chiefly on goods traffic, 3318—Approval of there being maximum rates in the case of any new railway, and that

Report, 1884—continued.

Dickens, Lieutenant Colonel, C B (Analysis of his Evidence)—continued.

that the Government should have power to vary the rates from time to time, 3319-3324.

Dildarnagar-Ghazipur Railway Return showing for each year the mileage, average age, cost, and general results of working, *App* 777.

Directors Statement that there is nothing prejudicial to the development of trade and commerce in the presence of Government directors on the boards of private companies, *Chapman* 765-767, 783-785—Statement that the directors of the Indian Railway Companies are as a rule nominated by the other directors, the nomination being subsequently confirmed by the shareholders, *Rendel* 5964-5971—Opinion that a Board of Directors in India as well as in England would be a mistake, *ib.* 5973.

Information respecting the antecedents of the directors connected with the different railways, total of sixty directors, some of whom are on the boards of several companies, *Danvers* 6963, 6964.

Dispatch Companies. Suggestion that a system of dispatch companies should be established in India for the promotion of traffic, similar to those in America, *Graham* 2744, 2745.

Division of Profits Opinion that the shareholders would not object to the principle of dividing profits in the event of further guarantees being given by the Government, *Danvers* 7080-7090.

Dual Control. See *Administration and Management*. *Guaranteed Railways.*

B.

Eastern Bengal Railway. Forcible illustration in the case of the Eastern Bengal Railway of the enhanced amount of purchase money entailed on Government by the operation of the guarantee at the expense of the resources of India, *Strachey* 19.

Average of 29,000 *l* a mile as the cost of the Eastern Bengal Railway when constructed, *Chapman* 808, 809—Economic reasons which have led the Government to propose to purchase the railway, *Conway-Gordon* 4092-4097.

Statement that although there has been a falling off in the traffic returns of the Eastern Bengal Railway there is no reason to doubt that the traffic on Indian Railways generally will increase, *Conway-Gordon* 5456-5459.

Revenue accounts for each half-year from 31st December 1881 to 31st December 1883, *App* 760, 761.

Statement showing for each year the mileage, average age, cost, and general results of working, *App*, 771.

Statistics of the cost of working under different heads, *App*, 798 *et seq.*

East India Association. Representation by witness of the East India Association, the committee of the Association being strongly in favour of a large and rapid extension of railway communication in India, *Anderson* 711-714.

Explanation that witness is not prepared to submit evidence in support of the memorial recently sent to the India Office by the Association, that is, as regards the precise ways and means of securing the proposed extension of railways, *Anderson* 724-731.

Witness, who was formerly a merchant in Calcutta, and was for some years a member of the Legislative Council, represents and submits the views of the East India Association in regard to railway extension, *Bullen-Smith* 2296 *et seq.*

EAST INDIAN RAILWAY:

1. *Administration by the Company; its Efficiency.*
2. *Rates; Control Exercised by Government.*
3. *Feeder Lines or Branches.*
4. *Traffic, Working Expenses, and Net Revenue.*
5. *Question of Loss by Exchange in respect of Capital.*
6. *Other Details on various Points*

1. *Administration by the Company; its Efficiency:*

During the famine of 1874 the East Indian Company did the work very well, but made the Government pay heavily, *Strachey* 250, 251—Inducement to extravagance by the guarantee on the Company's capital after the shares had reached a premium, though witness considers this as the best managed line in the world, *ib.* 304.

Evidence in detail to the effect that the line is managed with economy and efficiency, as shown by the results, *Rendel* 5621-5623, 5718-5720

EAST INDIAN RAILWAY—continued1. *Administration by the Company ; its Efficiency*—continued.

Statement that the working of the East Indian Railway by a private company has led to the very best results, *Danvers* 6876.

Statistics in confirmation of the efficient working of the line, as testified by Mr Danvers, *Crawford* 7436-7438, *App.* 710-712.

2. *Rates ; Control Exercised by Government*

Disapproval of the East Indian Company being subjected to such a competition by the proposed new line from Calcutta to Bombay as will compel the rates to be reduced to an unreasonable degree, admission, however, that the former Company have now conditional power to reduce the rates, *Crawford* 3669-3672, 3782-3791, 3816-3822, 3850-3856—Arrangement of the Company with the Government as to rates and fares; necessary sanction of Government before reduction, *ib.* 3782-3791, 3816-3822.

Decided opinion that the arrangement between the Government and the East Indian Railway is an exceedingly good one, the Company acts as contractor for the Government and is bound to defer to them as the owners of the line, *Crawford* 3797-3821, 3823—Statement that in forcing competition on the East India Company, the Government are to be blamed for jeopardising the interest of the line in which they themselves have a large stake; inexpediency of the Government going beyond their contract with the Company in this matter, *ib.* 3958-3960—Circumstances under which the Government objected to the reduction of the rates, *ib.* 3980-3984.

Uniform rate for carriage charged by the East Indian Company equal to four-tenths of a penny per mile; belief that on the new line from Kutai the rate will be about the same, *Crawford* 3990-3993.

Large power possessed by the Railway Company of still further reducing the rates if it should be necessary, *Rendel* 5621.

Direct control possessed by the Government over the rates of the East Indian Railway down to a certain minimum, *Danvers* 6928, 6929.

3. *Feeder Lines or Branches :*

Explanation with reference to "State line terms" in regard to the working of small subsidiary lines or feeders, willingness on the part of the East Indian Company to take over on the Government terms any feeder lines which may be constructed on the same gauge as the East Indian, *Crawford* 3696-3709, 3777-3779, 3797-3802, 3823, 3840-3849, 3961-3966, 4007, 4008—Difference of opinion between the Secretary of State and the Government of India in regard to the terms agreed to by the Company for working the feeder lines, *ib.* 3697.

4. *Traffic, Working Expenses, and Net Revenue*

Quality of goods and minerals carried by the East Indian Railway in the last year to the 30th June 1883, the total amounted to 2,615,000 tons, *Crawford* 3717-3719.

Statistics as to the cost of working the railway, showing the remarkably low rate at which both passengers and goods are carried; general admission that there is no railway in the world which is worked at so low a cost as the East Indian, *Rendel* 5621-5623, 5718-5720—Assertion that the traffic on this railway is as large as that on the London and North Western line, and is earned at one-half the charge, and one-third the cost, *ib.* 5621-5623, 5937.

Statement that although one or two of the metre gauge lines carry heavier passenger loads than the East Indian, they do not carry so much goods on the whole, *Rendel* 5623—Explanation that the traffic of the railway, both in passengers and in goods, is about twice as much as that of any other Indian line, *ib.* 5624.

The actual number of passengers carried over the East Indian Railway in the half-year ending 30th June 1883 was 5,619,414, *Conway-Gordon* 6850.

Statement showing the direct annual gain or loss to the State from railway outlay in each year since 1858-59, *App.* 558.

Statistics showing in aggregate sums the total cost, gross receipts, working expenses, net revenue, &c., *App.* 622.

Gross earnings, working expenses, and net revenue in each year since 1878-79, *App.* 633, 634.

Extract from "The Railway Gazette" of 27th July 1883, containing sundry details respecting the traffic and earnings of the East Indian Railway, as being the cheapest railroad working in the world, *App.* 649651.

Comparison between the East Indian, the Great Indian Peninsula, the Rajpootana-Malwa, and the Bombay, Baroda, and Central Indian Railways in 1883, and in other years, when the traffics on the other lines approximated to that of the Rajpootana-Malwa in 1883, *App.* 653.

EAST INDIAN RAILWAY—continued.**4 Traffic and Working Expenses, and Net Revenue—continued.**

Paper submitted by Mr Crawford containing sundry details relative to the working of the undertaking for the four years, 1880-1883, *App.* 710, 711—Summary of receipts and expenses under different heads, *ib.* 712.

Revenue accounts for each half-year from 31st December 1881 to 31st December 1883, *App.* 761

Statement showing for each year the mileage, average age, cost, and general results of working, *App.* 770.

Statistics of the cost of working under different heads, *App.* 798 *et seq.*

Financial results in the case of this line since 1879-80, *App.* 832.

5 Question of Loss by Exchange in respect of Capital

Particulars respecting exchange in connection with capital transactions; conflicting statements on the part of the Secretary of State in Council and of the Government of India, *App.* 700-709.

6 Other Details on the various Points:

Difficulty at first in organising any proper supervision over the construction of the East Indian Railway, efficient Government officers now available for this purpose, *Strachey* 308—Probability that the Government might have succeeded in borrowing on better terms than the company, *ib.* 309, 310

Illustration in the case of the East Indian Railway of the great value of lines through populous districts sometimes visited with famine, *Sir J. Caird* 444-446.

Explanation regarding the inconveniences experienced last year through the great scarcity of wagons on the East Indian Railway, which resulted in a serious block at Howrah, the chief cause of this block was the insufficient port accommodation at Calcutta, *Bullen-Smith* 2413-2415, 2438-2440.

Loss of about 300,000 *l.* to the East Indian line during the Mutiny by the removal of 17,000 tons of rails, *Crawford* 3780—Appointment of the directors of the company by the shareholders, and not by the Government, *ib.* 3302-3804—Provident fund established by the company, to which the officers contribute part, and the Government and the Company provide one per cent. out of the surplus profits beyond five per cent., *ib.* 3808, 3809

Large amount of extraordinary work being carried out on the East Indian Railway at the present time at the expense of reserve, *Rendel* 5621—Two-thirds of the line are single, and one-third double, *ib.* 5622, 5625

Elliott, C. F. Minute by him in January 1884, as a member of the Famine Commission, relative to the protective character of certain lines, importance attached to their rapid construction, *App.* 580.

Emigration (Natives) Very little disposition among the natives to emigrate from one district to another, *Sir J. Caird* 447—Instance of the readiness of the natives to emigrate when employment is available, *Birkmyre* 3331, 3332.

Impossibility of inducing the natives to migrate so as to avoid the danger of famine—emigration is utterly alien to the native manner of life, *Westland* 5233, 5234

Statement that of the total population there are from twelve to fifteen millions of the people who have either themselves migrated or are the children of immigrants, *Hunter* 7100.

Employment Great benefit anticipated as regards diversity of employment from the extension of railways in India, *Sir J. Caird* 381, 432, 433—Advantage in the employment of able-bodied natives in the construction of lines in famine time, *ib.* 402, 632, 633

Further statement as to the advantage of construction in time of famine so as to give employment, though in any case the more populous districts should first be protected, *Sir J. Caird* 665-670—Grounds for the opinion that railway extension is very advantageous as leading to diversity and increase of employment, *ib.* 692-695, 698

Statement that though all the railway superintendents are Englishmen and Scotchmen the whole of the actual work, including the construction of the largest bridges, is done by natives, *Glover* 1920-1922—Belief that Indian labour might be very much more utilized than it is at present upon railway works, *ib.* 1938-1940—Native labourers though more sober than Europeans are not so trustworthy in money matters, *ib.* 2004-2006

Further examination in regard to the available local labour in India and the tendency for its cost to increase, explanation that the cost of coolie labour being so small, the proposed extension of railway work would not affect it very much, *Glover* 2086-2097, 2150-2153, 2201-2203, 2244-2247

Employment—continued

Considerable extent to which the railways in India conduce to the employment of labour, 95 per cent. of the employés are natives, *Lord* 1462.

Large number of up-country men employed by witness at Calcutta, the natives readily migrating if they have an inducement in the way of employment, *Birkyns* 3331, 3332

—Conclusion that one of the most undeveloped resources of India is her saleable labour; examples illustrative of this view, *ib* 3338, 3391-3394

See also *Emigration. Plate-laying*

ENGINEERS (RAILWAYS, &c.):

Efficiency of the Government military engineers employed in working the lines; separate establishment kept up specially for India, *Strachey* 1227-1229.

Information respecting the Engineers' College at Poona; statement that many of the natives who were trained there are now holding responsible positions as executive engineers and as contractors, *Coke* 1253 1407-1409 1506-1509

Great obstruction met with by witness in his dealings with the official engineers of the Government, instances in support of this statement, *Glover* 1881-1888, 1923-1932 2013-2015, 2029-2035 2061-2070—Less practical knowledge possessed by the Government engineers than by those employed by private companies, *ib* 1882—Necessity, in the case of Government works for witness, as contractor, to add 10 per cent. to his rates, because of the obstruction met with from the executive engineers and other officials, *ib*, 1927-1932, 2211-2122.

Additional evidence respecting the inconveniences resulting from the constant friction between the contractors and the Government engineers; instance of a firm of contractors obliged to leave India and give their contract up, from this cause, *Glover* 2111-2122 2207-2240—Delay on the part of Government in payment of the contractors' monthly certificates, *ib*, 2112

Expediency that every engineer engaged on works of construction in India should have had previous experience either in that country or in England, *Glover* 2145, 2145—Efficiency of native engineers who have been educated and trained in the Indian Engineering College, *ib*, 2147-2149.

Importance of a rule being laid down by the Director General of State Railways that no executive engineer or engineer-in-chief should be appointed to supervise a contract unless he has had previous experience in India, *Glover* 2232-2240.

Disagreements with certain evidence to the effect that much inconvenience and loss have been caused by the want of experience on the part of railway engineers appointed by the Government, *Dickens* 3049 3054—Opinion that the former action of the Indian Government in discharging a large number of engineers was inexpedient; approval of increasing the staff at the present time, *ib*, 3125-3133, 3140-3150 3271, 3285-3287—Statement that for various reasons there would be greater difficulty for the Government to engage engineers than would be the case as regards private companies, expediency, if these difficulties can be surmounted, for the Government to engage those officers on the same terms as the companies would do, *ib* 3140-3150.

Great importance in the employment of engineers that they should possess large Indian experience as well as knowledge of technical engineering, *Dickens* 3179-3182, 3233-3237—Absence of difficulty in obtaining at any moment a sufficient staff of competent engineers for railways so long as the amount of construction is kept within moderate limits, *ib*, 3271-3274—Approval of a training college for the education of young men as engineers, Government having the advantage of their services at a moderate remuneration, *ib*, 3287-3289.

Explanation of the means adopted by the East Indian Company to establish a staff of engineers of regular grades of service and salaries, decided objection to the system of competition as regards the appointment of junior engineers, *Crawford* 3806-3810.

Circumstances under which witness was employed under a civil engineer upon his obtaining his first commission as a Royal Engineer under the old East India Company, explanation that his service has been entirely in India and that he is a local officer, *Conway-Gordon* 4078-4081.

Opinion that it will not be necessary to consider the question as to the pensions of the engineers, as the probability is that when the proposed railways are completed it will be necessary to construct others, *Conway-Gordon* 4124-4126—Great importance of employing only competent and experienced men as engineers, calculation that the difference between an experienced and an inexperienced engineer is as much as 1,000 £ a mile on railways which cost 6,000 £ a mile in construction, *Rendel* 5652-5657, 5666-5671 5721-5725 5841 5800-5863 5961-5969—Considerable difficulty which would be experienced in obtaining competent engineers in the event of any increase in the proposed amount of railway construction, *ib*, 5668-5674

Facility

ENGINEERS (RAILWAYS, &c)—continued.

Facility to reduction of cost through the experience gained by the engineers, *Rep viii*—Concurrence of evidence adverse to any sudden increase of the engineer establishment, *ib. ix*

Engines and Rolling Stock. Explanation that the carriages are a good deal wider in proportion to the metre gauge than the broad, *Trevor 1775*—Effect of the overhang of the metre gauge carriages in increasing the tendency to accident as well as to wear and tear, *ib.*

Engines repaired but not made in India, rolling stock constructed in India, the iron work being sent out from England, *Conway-Gordon 447-4452*—When lines are converted from narrow to broad gauge the engines and rolling stock are transferred to other metre gauge lines, impossibility of converting the rolling stock, *ib. 4613-4615*

Greater facility of reducing the weight of the engines on the narrow than on the broad gauge lines, *Bendel 5687*

Explanation that one of the main points in working a railway is that the locomotives should be kept out of the workshops as long as possible, belief that the same amount of haulage cannot be got out of a narrow as out of a broad gauge locomotive before it requires repairing, *Conway-Gordon 6835-6838*

Details relative to carriage and waggon expenses in relation to the mileage run, *App. 840-845*

See also *Gauge*

Etawa. See *Bilaspur-Etawa Railway.*

EXCHANGE, LOSS BY.

Reference to the subject of loss by exchange as a difficult problem; question whether, if the taxpayers of India lose from three to four millions annually in remitting money to pay interest in this country they do not, on the other hand, gain by the enormous increase of exports, *Coke 1340*

Evidence in regard to the anticipated loss by exchange as a result of increased loans in England, on account of the Government of India having to remit to Europe the interest upon the loans; argument that the natives of India are not affected in any way by loss of exchange as they consume only the articles which are produced in the country, *Coke 1441-1447 1472-1489.*

Information generally in regard to the inevitable loss by exchange involved by borrowing in England, so long as the Indian accounts are kept on the present system; explanation that the loss caused by a rise in the exchange would without doubt fall on India and not on England, *Bullen-Smith 2344-2348 2401-2411 2416-2437 2447-2459*

Grounds for the view that the financial operations of the Government in respect to loans would have but a very small effect on the exchange, steadiness in the rate of exchange during the last five years, *Lord 2489-2494 2499, 2500*—Grounds for believing that too much has been made of the loss by exchange difficulty, *Graham 2747, 2748*

Opinion that the existing contracts with guaranteed companies by which they are enabled to debit rupees at a fixed rate of exchange has been a disadvantage to the Indian Government, expediency of the Government securing itself in the future by making the guarantee dependent on the exchange, *Dickens 3078-3085.*

Explanation that the loss of exchange in the railway accounts varies from year to year according to the fall in the value of the rupee, *Conway-Gordon 3645-3647*—Fatal blunder in the old contracts with guaranteed companies of laying down a fixed rate of exchange for all transactions between Government and this country, assertion that the Indian Government lose from 1 d. to 2 d. for every rupee the old companies spent in India, *ib. 4295*—Argument that the loss by exchange and the cost of land are part of the capital charges borne directly by the Government, which should carry four per cent interest against the working accounts, *ib. 4396*

Explanation as to the method by which the question of exchange is dealt with in the finance papers, arbitrary and artificial sense in which the statement that ten rupees, as equal to 1 l. sterling, must be considered in these accounts, *Westland 4776*—Considerations as to the proper mode of charging loss by exchange in the railway accounts, explanation that this question is a mere matter of account, and that there is loss by exchange upon borrowed money as well as upon remitted money, *ib. 5031-5033 5067-5080.*

The net annual revenue of India, when there is neither a surplus nor a deficit, amounts to seventeen millions sterling, the loss by exchange in remitting fourteen millions of this revenue to England amounts to three millions sterling, *Westland 5067-5069.*

EXCHANGE, LOSS BY—continued.

Explanation as to the effect of loss by exchange upon the capital transactions of railways, *Westland* 5106-5108—Additional entry suggested in the accounts so as to charge the exchange upon the amount of sterling borrowed, *ib* 5222-5227

Opinion that a fall in the present rate of exchange would not have any very beneficial effect on India, *Robertson* 6668-6671—Argument that the importance of railways is so great that any loss by exchange which may arise in connection with their construction will be more than counterbalanced by the increase in prosperity produced by their extension, 7180-7184

Paper submitted by Mr. Westland dealing with the question of loss or gain by substituting sterling borrowing for rupee borrowing; correction of misapprehension on various points, *App* 624-629.

Explanation by Mr. Westland as to the incidence of the charge for exchange, and the real burden involved, *App*. 635.

Statement showing a distribution of the charge for "exchange on transactions with London" in 1882-83, over the transactions in England during that year, *App* 695

Telegraphic communication from the Governor General, dated 22nd June 1884, substantiating grounds for dissenting from certain conclusions embodied in Financial Despatch from the Secretary of State of 27th May 1884, *App* 700, 701.

Despatch from the Secretary of State to the Government of India, dated 27th May 1884, containing explanations on the question of profit from the railways in connection with the loss on the exchange, &c., *App* 702, 703

Memorandum attached to Despatch of 27th May 1884, together with tabular statistics, in support of the conclusions arrived at by the Secretary of State in Council, *App* 704-706.

Necessity of the possible loss by exchange being accepted as an element of risk either to the Government or the investor, *Rep* ix—Absence of loss in remitting the dividends to England unless the value of the rupee should fall yet further, *ib*.

Belief that rupee loans, which are not really absorbed in India, do not differ materially from sterling loans in their effect upon exchange, *Rep* xii.

See also *Loans*.

EXPENDITURE (RAILWAYS):

1. Evidence explanatory of the Views of General Strachey upon the Question of future Railway Expenditure.
2. Views of General Diciens as to the Rate of Expenditure desirable
3. Proposals of the Government of India, as advocated by Major Conway-Gordon; Details submitted by him in explanation and support of the proposed Expenditure
4. Conclusions of Mr. Westland and Mr. Danvers as to the Expediency of Increased Outlay on Railways, and as to the Annual Cost to be incurred
5. Evidence explanatory of the Views of other Witnesses as to the Rate of Expenditure desirable.
6. Official Papers and Correspondence on the part of the Government of India and of the Secretary of State for India in Council
7. Returns and Statistics showing the Expenditure down to the present Year
8. Conclusions and Recommendations of the Committee.

1. Evidence explanatory of the Views of General Strachey upon the Question of future Railway Expenditure:

Entire dissent from the recommendation by the Select Committee of 1879 that the annual sum to be spent by the Government on railway from borrowed money shall not exceed two and a-half millions, *Strachey* 12. 14, 15. 224—Perfectly safe financial position in continuing to borrow money for railway construction so long as there is an absolute net income, after paying all charges, *ib*. 13. 16-18.

Misfortune through the vote of the House of Commons to the effect that expenditure should be reduced, thus having probably led to the appointment of the present Committee, expected arrangement otherwise between the Secretary of State and the Indian Government, *Strachey* 29, 30. 225, 226.

Statement to the effect that in addition to the two and a-half millions a year at present authorised to be borrowed for public works, there might be allowed another million (that being the present annual surplus from railways), *Strachey* 120-132 156-144. 179-181—Very large capital expenditure annually on railways over and above the two and a-half millions authorised to be borrowed by the Government, large outlay estimated for the coming year, *ib*. 132-135

Conclusion that a capital outlay of 25,000,000 L. would provide about 5,000 miles of railway, which even in the famine districts would be more or less productive and would provide

Report, 1884—continued.

EXPENDITURE (RAILWAYS)—continued

1 Evidence explanatory of the Views of General Strachey, &c.—continued.

provide something towards the interest, *Strachey* 170-178—Explanation that witness does not propose to limit the outlay strictly to 3,500,000 *l* in each year, as in future years the revenues may admit of a larger annual surplus than 1,000,000 *l*, *ib* 180, 181

Further objection to the surplus of one million from the railway being specially set aside as a means of meeting the guarantee or interest on additional capital expenditure, expediency of the action of Government respecting railways being regulated from year to year, *Strachey* 227-232

Witness further submits that the surplus of a million from the railway should be regarded as available for the obligations and contingencies generally which may arise, and should not be allocated specially or exclusively to railway extensions, *Strachey* 321-335

Further statement in depreciation of specific recommendations and restrictions, as laid down by the Committee of 1879, though witness does not object to general recommendations of a restraining character, where no hard and fast line is laid down, *Strachey* 356-365 367

Further expression of the opinion that the surplus of one million, as in 1873, does not justify increased borrowing for railways, *Strachey* 1053 1065—Statement in further approval of a total annual expenditure by Government of three-and-a-half millions of borrowed money in the extension of railway and irrigation works, but not as interest on a large capital expenditure to a much greater amount, *ib* 1075 *et seq*

Grounds for strongly objecting to the use of two-and-a-half millions as annual interest, for providing an immediate capital outlay of about 62,000,000 *l* by private companies, *Strachey* 1079-1115—Impracticability of limiting the capital outlay to a specific sum, in respect of which the Government should be liable for interest or guarantee, *ib* 1136.

Question further considered as to the expediency of the limit of 2,500,000 *l* a year as laid down by the Select Committee of 1879, for expenditure on public works, respects in which open to objection, *Strachey* 1239-1248

Circumstance of witness when in India having been considered extravagant in his ideas respecting public works, whereas he is now looked upon by many as an obstacle in the way of progress, *Strachey* 1249, 1250.

2 Views of General Dickens as to the Rate of Expenditure desirable :

Conclusions generally as to the expediency of extending the railway system in India; suggestions with reference to the mode to be adopted for deciding as to the annual scale of expenditure upon the works, *Dickens* 3046-3048. 3055-3064. 3110-3124 3151-3177 3212-3215 3225-3232

Opinion that the present state of Indian finance quite justifies the expenditure by the Government of a much larger amount than that recommended by the Parliamentary Committee of 1878-79, *Dickens* 3046-3048—The amount which could judiciously be laid out annually upon railway extension might amount to something between three and five millions, *ib* 3055

3 Proposals of the Government of India, as advocated by Major Conway-Gordon ; Details submitted by him in explanation and support of the proposed Expenditure

Information generally with reference to the proposals of the Government of India in regard to railway extension, intention to spend about thirty-three millions sterling upon railways during the next five years, and to leave about twenty-four millions to be spent by private individuals or companies, *Conway-Gordon* 3496-3505. 3518-3525 3527 3573-3576 3579-3584

Favourable comparison of the proposed expenditure with the amount annually expended in previous years, *Conway-Gordon* 3506-3508 3518—Contention on the part of the Government that the expenditure from ordinary and from borrowed funds must be considered together, *ib* 3531—Decided opinion that the proposals made by the Government are financially sound, *ib* 3535

Strong opinion that, as the Government intend to carry out a policy for improving the communications in India, and of generally developing the country, every effort should be made to reduce the expenditure in other directions, belief that it is quite practicable to carry out this suggestion, *Conway-Gordon* 3549-3551.

Further approval of the extent to which the Government of India propose the construction of railways, belief that the proposed expenditure is safe, and could be carried out with the existing staff, *Conway-Gordon* 3632-3640

Report, 1884—continued.

EXPENDITURE (RAILWAYS)—continued

3 *Proposals of the Government of India, &c—continued*

Opinion that the Government, if it errs on the point, errs on that of over caution, *Conway-Gordon*, 3640.

Further consideration of the proposed expenditure upon railways both by the State directly and through the agency of private companies, in the event of private companies not being found to undertake the works, it will become necessary for the Government to consider as to constructing the lines themselves, *Conway-Gordon* 4029-4056 4107-4111. 4128-4135. 4183-4185. 4306— Conclusion that the expenditure in the next five years by the State will not be much in excess of the preceding period, if the whole outlay upon public works be taken into consideration, *ib.* 4053-4054.

Desire on the part of the Government to legitimatise the present expenditure, which in a sense was an evasion of the limit of 1879 (as laid down by the Select Committee), rather than to go beyond it, *Conway-Gordon* 4107-4111— Importance that the decision of the present Committee with regard to the amount of expenditure on railways should be so definite as to prevent any misapprehension in the future, *ib.* 4136-4138.

Expediency of a system of forecasts extending over five years in regard to railway expenditure, discontinuance at the present time of the forecasts instituted by Lord Northbrook, *Conway-Gordon* 4702-4708— Explanation that though the Indian Financial Budget is in itself a forecast, it extends only over two years, *ib.* 4703

Impossibility of naming offhand the amount to be raised annually for railways without imposing additional taxation, *Conway-Gordon* 4709-4711— Opinion that if the prosperity of Indian railways continue, and allows larger expenditure without increased taxation, discretion as to such expenditure should be left with the Government of India, *ib.* 4731, 4732.

Desirability that the present Committee should express an opinion that the limit of expenditure upon railways laid down by the Committee of 1879 is no longer required, 5611-5613.

Explanations in detail by Major Conway-Gordon in connection with Appendices showing the lines already specifically sanctioned by the Secretary of State, the lines either directly or indirectly approved by him, and the lines which have not as yet received either his sanction or approval, *App.* 853-920

4 *Conclusions of Mr Westland and Mr. Danvers as to the Expediency of Increased Outlay on Railways, and as to the Annual Cost to be incurred.*

Explanation as to the financial results of the present proposals of the Government in regard to railways, calculation that 30 per cent. of the whole amount proposed to be spent will be paid in sterling in England, and the balance will be the actual expenditure in rupees in India, *Westland* 4776-4784. 4866-4875. 4960, 4961.

Consideration of the question of risk, as run by the Government in guaranteeing interest on, or in themselves constructing, railways, in connection with the question of there being a reserve of expenditure, belief that in case of accident the Government would suspend some of the ordinary works, so as to continue the construction of the railways, *Westland* 5056-5060. 5098-5105. 5183-5185.

Further evidence in relation to the proposed expenditure upon railways in the future, liability of the Government as to additional expenditure in the next five years, *Westland* 5121-5128

Opinion that the proposals of the Government of India in regard to the construction of railways are reasonable, and that they can be carried out without inconvenient financial pressure, *Danvers* 6873. 7076-7079.

Explanation that if within the five years' forecast, some accident occurred to interfere with the revenue, the expenditure on State works would have to be suspended, if, however, the engagements were with companies, the works would go on as usual under their contracts, *Danvers* 7072, 7073.

Consideration by Mr Westland of the financial results of the proposals of the Government of India as regards railway extension, conclusion that a considerable margin exists after undertaking the whole of the proposed lines, *App.* 640-645

Paper handed in by Mr Westland showing the capital expenditure on railways since 1850-81, and the total outlay now proposed annually, *App.* 645

5. *Evidence explanatory of the Views of other Witnesses as to the Rate of Expenditure desirable.*

Explanation that witness does not propose a larger expenditure than 6,000,000 l. a year, so as to include outlay on irrigation works, *Sir J. Caird* 604-610.

Contention that the Government in India should be the proper judges as to the proposed expenditure of fifty or sixty millions on railways; expediency of limiting the control

Report, 1884—continued.

EXPENDITURE (RAILWAYS)—continued.

5 Evidence explanatory of the Views, &c.—continued.

control of the Secretary of State over the Indian Government, especially in financial matters, *Coke* 1269-1273. 1400-1403. 1427-1430 1544-1550. 1554-1556.

When witness was in India 2,500,000 l. a year was allocated to productive public works, about two-thirds going to railways, *Trevor* 1576.—Great caution necessary if the expenditure upon railways is to be largely increased, inexpediency of a very large or a very sudden increase of expenditure, *ib.* 1580-1582 1607-1611. 1793.—Conclusion that the proposal of the Government of India to spend fifty millions sterling in four or five years is unreasonable, and that the full benefit of the expenditure will never be obtained, *ib.* 1826

Decided opinion that the present financial position of India fully warrants a more rapid extension of the railway system than has taken place in the last few years, assertion that an expenditure of from fifty to sixty millions in the next five years is quite possible and entirely judicious, *Glover* 1889-1897. 1994. 1995

Grounds for considering it expedient to extend the railway system in India on a large scale, and to expend from fifty to sixty millions in the next five years, *Clarke* 2266, 2267. 2270

Decided opinion that there should be a reasonably large and rapid extension of all public works, and especially railways, in India, expediency of expending ten millions annually for this purpose, *Wood* 2276-2278.

Approval of an annual expenditure of six or eight millions; expediency of the Government making lines that, with the exception of famine lines, would prove remunerative, *Bullen-Smith* 2321-2324. 2387-2406. 2441-2446.—Dissent from the views of the Chambers of Commerce of Madras and Bombay in regard to the proposal that works involving an expenditure of sixty millions should be undertaken at once, *ib.* 2398-2400 2441-2446.

Approval of an annual expenditure of ten millions, *Lord* 2512, 2513.

Contention that the existing surplus revenue from railways should be treated as a reserve for increased expenditure and not appropriated to lessen taxation in any shape, *Bythell* 2610.—Expediency of increasing the expenditure upon railways by about four millions annually, *ib.* 2612.

Strong opinion that the surplus revenues of railways should be devoted to meet the interests on fresh loans; anticipation that there will be a steady average increase of traffic, *Graham* 2723 2750-2767 2776-2780.—Grounds for considering that the financial position of India fully justifies a departure from the limit of two millions and a-half for railway construction; belief that eight millions may be annually spent in this way, *ib.* 2728-2732. 2736

Belief that in India European opinion is very much in favour of a largely increased expenditure for the extension of railways; recommendation by the Bombay Chamber of Commerce in favour of an expenditure of twenty millions sterling annually, *Hardie* 2810-2819 2840-2842.—Disapproval of such an extension as is proposed by the Bombay Chamber; grounds for the opinion that it would be difficult to spend judiciously upon railways as much even as ten millions sterling annually, *ib.* 2817-2819 2846-2851. 2884-2886.

Desirability of the Government spending much larger sums on railways; proposal that there should be spent in the next seven years what the present limit would give in twenty years, *Birkmyre* 3352. 3379. 3380. 3386. 3477

Witness submits that the proposal to spend from fifty to sixty millions sterling upon Railways in India during the next five years is enormous, unnecessary, and uncalled for, *Crawford* 3861, 3862.

Proposal of the Indian Government to spend during the next five years on canals and railways thirty-eight millions sterling, as compared with thirty millions in the preceding period of five years; amount to be spent on irrigation and railways, respectively, *Waterfield* 6089.—Exception taken to so large an expenditure as thirty-three millions in the next five years, *ib.* 6207-6217

Perfect agreement of witness with the evidence of Mr. Westland and of Major Conway-Gordon as regards the financial character of the proposals of the Government of India respecting the construction of railways, *Hunter* 7137.

6. Official Papers and Correspondence on the part of the Government of India and of the Secretary of State for India in Council.

Despatches from the Secretary of State, and letters in reply from the Government of India, in the period from the 6th January 1881 to 29th January 1884, respecting railway extension, the progress to be made, the cost to be incurred, and the means of meeting the interest on outlay, *App.* 488 *et seq* — Restrictions laid down in the Despatch of January 1881 respecting expenditure on railway extension, *ib.* 488-492.

Report, 1884—continued

EXPENDITURE (RAILWAYS)—continued.**6. Official Papers and Correspondence, &c.**—continued

Total of 15,300,000 *l.* as the estimated cost of 3,083 miles proposed by the Government of India in July 1881; *App* 494.

Views of the Secretary of State, in December 1881, adverse to so large an expenditure as that proposed by the Indian Government, on account of the liability involved under the system of guarantee, *App* 507-509.

Letter from the Government of India, dated 23rd January 1883, submitting general conclusions, and proposing that thirty-two millions be spent in five years, irrespectively of lines costing twenty-four and a-half millions offered to private unguaranteed companies, *App* 509-545.

Total estimated cost of each line proposed by the Government in January 1883, *App* 524-526—Aggregate of 27,552,000 *l.* as the proposed expenditure on certain lines subsequently to 1882-83, irrespectively of the lines to be carried out by private enterprise, how this money should be raised, *ib.* 524-527.

Memorandum showing the amounts to be raised in different ways, the total proposed being 30,082,000 *l.*, *App* 528.

Total of 24,344,000 *l.* estimated for lines to be left to private enterprise, *App* 529-531.

Despatch from the Secretary of State to the Government of India, on 16th August 1883, with reference to the schemes proposed by the latter and the large outlay involved; this outlay not approved, it being decided to refer the question of railway extension to a Select Committee of the House of Commons in the Session of 1884; *App* 546-549.

Letter from the Government of India, dated 24th September 1883, demurring to certain calculations of the Secretary of State, and urging the construction of certain lines without delay, *App* 550-558.

Revised schedule of indispensable lines, together with the estimated cost in each case, *App* 574-576.

Further memorandum, or revised statement, showing the amounts proposed to be raised in different ways, the total being 27,832,000 *l.*, *App* 571, 577.

Sanction or approval by the Secretary of State of expenditure to the amount of 15,602,450 *l.*, leaving 12,660,000 *l.* for further consideration, that is, in respect of the total expenditure proposed by the Government of India (28,262,450 *l.*), *App* 853, 919, 920.

7. Returns and Statistics showing the Expenditure down to the present Year:

Statement of the capital expenditure on railways for each of the twenty-five years ending 1883-84; *App* 566.

Statement of the net disbursements of the Home Treasury of the Government of India in respect of railways and irrigation in each year since 1867-68, *App* 696, 697.

Amount of capital outlay in each year on railways and other works of a public character, *App* 698, 699.

Statistics in detail submitted by Major Conway-Gordon respecting expenditure on public works of different classes, and the revenue therefrom, *App* 714 et seq.

Summary showing the total expenditure in each year, *App* 740, 741.

Statement showing the amount of capital raised to the end of each year, and the annual amount withdrawn for expenditure since 1858; *App* 750.

Statement showing for each year from the commencement the capital outlay on each railway in India, *App* 770-781.

Statistics respecting different protective lines, showing the length, total estimated cost, outlay to end of 1882-83, probable outlay in 1883-84, and the balance needed to complete, *App* 790, 791.

Comparative statement (submitted by Major Conway-Gordon) showing the cost of construction of the several broad and narrow gauge lines, respectively, based on the capital outlay on 31st December, 1882, *App* 796, 797.

8. Conclusions and Recommendations of the Committee.

Summary of the capital expenditure on the construction of railways in the five years before 1879, and in the five subsequent years; average annual increase of 475,000 *l.* in the latter period, *Rep* iv, v.

Opinion that a careful forecast having been made of future requirements for public works over a considerable term of years, such a scale of expenditure should be adopted upon railways as can reasonably be maintained, *Rep* xi.

Conclusion

EXPENDITURE (RAILWAYS)—continued.8. *Conclusions and Recommendations of the Committee*—continued.

Conclusion that the amount proposed to be spent by the Government of India during the next six years is moderate, and that looking to the experience of past years, and to present prospects, there is a fair ground for expecting that an extension of the railway system on the scale proposed will have most beneficial effects, *Rep. xi.*

Great difficulty in arriving at any definite conclusion respecting the sum which may, on an average of years, and with safety to the finances, be annually borrowed for the construction of public works, *Rep. xii.*

Opinion that whilst the present limit of annual borrowing, fixed by the Committee of 1878-79 at 2,500,000 l., might safely be enlarged, the full responsibility of deciding upon the amounts to be borrowed from year to year should rest with the Secretary of State in Council, *Rep. xii.*

<i>See also Accounts</i>	<i>Capital.</i>	<i>Cost of Lines</i>	<i>Financial Condition of India.</i>
<i>Financial Results of Railways.</i>	<i>Exchange, Loss by</i>	<i>Extension of Railways.</i>	
<i>Famines and Famine Lines.</i>	<i>Gauge</i>	<i>Guaranteed Railways</i>	<i>Loans</i>
<i>Private Enterprise</i>	<i>Productive Lines</i>	<i>Protective Lines.</i>	<i>Public Works</i>
<i>Department.</i>	<i>State Railways.</i>	<i>Taxation.</i>	

EXPORTS

Expectation that the exports from India will assuredly increase and will admit of increased remittances from India in payment of interest on English capital invested in railways, *Strachey 352.*

Large proportionate increase in the value of exports from India since 1873 than in the case of any other country, particulars hereon, *Sir J. Caird 413*—Increasing apprehension of foreign countries in respect of the growing export trade of India, illustration in the case of Italy, *ib. 413. 502*

Opinion that there would be an enormous increase in the export of Indian produce if railways were more extensively constructed in that country, *Coke 1259*—Information respecting other articles of produce besides wheat which would be exported from India in larger quantities by the development of the railway system, argument that there will be a very considerable increase of production in those districts which are not served by railways at all at the present time, *ib. 1419-1421. 1496-1500. 1528-1531*

Examination respecting the lines which it is most expedient to construct with the object of tapping these districts which produce articles for exportation, contention that this is a question upon which the Government of India must furnish the best information, *Coke 1451-1454. 1459-1465. 1550-1553*

Increased export of goods from India which would follow on an extended railway system, *Lord 2503-2505*—Strong opinion that facilities of export stimulate the industry of the people, belief that if these facilities did not exist there would probably be no supplies of food over the local requirements in the event of famine, *Hardie 2905-2909*—Opinion that in no sense is it a function of the Government so to impose rates that the export trade should be stimulated, *Birkmyre 3468, 3469.*

Abnormal character of the large export of grain and other articles from India within the last two years, which has led to the present mistaken demand for increased railway accommodation, *Crawford 3660*—Statement that Bombay and Calcutta are the only two ports in India from which the products of the greater part of the country find their way to foreign lands, argument that these two ports are at present amply served by great trunk lines, *ib. 3662, 3663 3919-3926.*

Export taxes entirely remitted in India, with the exception of that on rice, *Westland 5399-5314*

Information with regard to the large amount of exportable produce which might be brought to the coast if there were sufficient railway accommodation; confident opinion that the wheat supply of India may be looked upon as a certain source of export, *Conway-Gordon 5460-5468. 5510-5520 5560-5583.*

Stimulus to the Indian export trade caused by the low rate of exchange throwing cheap money into the country, large extent to which the extension of railways has also assisted to develop the export trade, *Robertson 6662-6671.*

Conclusion that if railways are so extended as to induce an export of grain to England, there will be no fear that the people will be deprived thereby of their food, contention that the advantages connected with export would more than compensate for certain local disadvantages, *Hunter 7168-7180. 7205-7213. 7348-7350.*

Concurrence of evidence before the Committee as to the rapid development of the export trade in recent years, great increase since 1864, *Rep. vi.*

See also Bombay Port. Calcutta Cultivation of the Soil. Grain. Wheat.

EXTENSION OF RAILWAYS:

1. *Views of General Strachey as to the Rate of Construction to be carried out*
2. *Conclusions and Suggestions of Sir James Caird*
3. *Explanations and Suggestions on the part of Mr. Westland and Mr. Danvers*
4. *Details submitted by Major Conway-Gordon in support of the Extensions proposed by the Government of India.*
5. *Evidence of other Witnesses as to Progress desirable to be made in the Construction of New Railways.*
6. *Exception taken by Mr. Crawford to any large Extension at the present Time.*
7. *Papers and Correspondence on the part of the Government of India and of the Secretary of State.*
8. *Conclusions and Recommendations of the Committee.*

1 *Views of General Strachey as to the Rate of Construction to be carried out:*

Considerable advance of construction since 1880, whilst the finances of India are in a better condition than they were four years ago, *Strachey* 4, 5—Action of the India Office since 1870 in the direction of restraining expenditure advocated by the Government of India for the more rapid extension of railways, *ib.* 6

Circumstance of there having been as many as 2,000 miles under construction on 31st December last, *Strachey* 26—It is a delusion to say that the progress of railways in India has been slow, *ib.*

Desire of witness that railways in India should be extended as far as is financially profitable, it being important to provide not only protective lines but military lines, and to develop the resources generally of the country, *Strachey* 115-119.

Information respecting the progress being made with the construction of new lines; total of 2,967 miles under construction or sanction for 1884-85, of which it is estimated that 1,103 miles will be opened within the year, *Strachey* 145-150.

Effect of the extension of railways in inducing more wide-spread cultivation, and in increasing the obligation to take effectual steps for the relief of famine, *Strachey* 275-278—Prospect of satisfactory progress if the matter had been left to the Secretary of State and the Government of India, *ib.* 284, 285.

Explanation that witness fully approves of the rapid construction of some 5,000 miles of new railways, but always with due reference to the financial resources of the country, *Strachey* 317 *et seq.*

Strong advocacy of railway extension as a means of developing the resources of India and of increasing the prosperity of the country, it being expedient however to limit the amount of borrowed money to the general condition of the finances, *Strachey* 322-340—Importance further attached to exceedingly cautious action in undertaking costly public works in India, *ib.* 366, 367.

Occupation of the principal trade routes by the existing lines; varying conditions as to population, &c. by which the extension or correcting lines in different districts should be settled, *Strachey* 1188-1190.

2. *Conclusions and Suggestions of Sir James Caird.*

Fulfillment practically of the recommendation of the Famine Commissioners up to the present time as regards the annual rate of extension, it having been proposed to construct 10,000 miles at the rate of 400 miles a year, *Sir J. Caird* 377-379—Several circumstances which are now favourable to more rapid extension than was proposed when the Famine Commissioners reported, better financial condition of India, whilst the cost of construction has greatly fallen, *ib.* 380-384.

Opinion that it is not desirable to construct so rapidly as is proposed by the Government of India, and that it would suffice if in the next four years 5,000 miles were made; annual cost involved, *Sir J. Caird* 396—Suggestion that about 1,000 miles of broad gauge would complete the great through lines, *ib.* 402, 453-456.

Further objection to the construction of unproductive lines in India with borrowed money until the more populous districts are first served, *Sir J. Caird* 417-430, 439, 543-545.

Explanation with further reference to the reasons for suggesting that the extensions for the next four years shall be at the rate of 1,250 miles a year; this is threefold the average of the last ten years, *Sir J. Caird* 648-659—Prudential reasons other than financial considerations for not proposing a more rapid rate of construction than 1,250 miles yearly; probable disturbance of the labour market unless the construction be distributed over different districts, *ib.* 664-664.

3. *Explanation.*

Report, 1884—continued.

EXTENSION OF RAILWAYS—continued.**3 Explanations and Suggestions on the part of Mr. Westland and Mr. Danvers.**

Particulars with reference to the proposals of the Government of India as to construction of railway since 1881, feeling on the part of the Government that commercial lines must be put aside, and that only lines protective against famine should be taken up, *Westland 4746-4763.*

Statement that the Financial Department concurs generally in the proposals of the Public Works Department in regard to railway construction; inexpediency of the Government binding itself to any hard-and-fast programme either as to the particular lines to be made or the order in which they are to be taken up, *Westland 4773-4775, 4942-4950, 5010-5018.* Opinion that the Government of India has not pledged itself absolutely to the proposed scheme in regard to railways, but has simply expressed conclusions in its favour, *ib. 4774, 4775.*

Conclusion of the Government that the best use they can make of the growing revenue is to prosecute a scheme of railway construction which has for its object the development of the country and its protection from famine, *Westland 4776.*

Extent of railways now in process of construction, *Danvers 6869.*—Strong opinion that a more rapid extension of railways is desirable, if it be carried out judiciously; expectation that an expansion of the railway system will have for various reasons most beneficial results, *ib. 6871, 6873, 6887, 7016-7027.*

4 Details submitted by Major Conway-Gordon in support of the Extensions proposed by the Government of India:

Information generally with reference to the proposals of the Government of India in regard to railway extension, *Conway-Gordon 3496-3505, 3518-3525, 3573-3576, 3579-3584.*—Statistics of railway construction showing that the proposed average rate of 779 miles of new railway, annually, cannot be considered as a sudden increase of operations, *ib. 3526.*

Opinion that the proposals of the Government of India with regard to the extension of railways, are moderate, the average annual construction contemplated being 779 miles, *Conway-Gordon 4022-4028.*—Contention that the railway system should be extended so long as money can be spent with a fair prospect of return, *ib. 4126-4128.*—If the distinction between productive and protective works be abolished the construction can be carried on at a more rapid rate than at present, *ib. 4289-4291.*

Strong opinion that the question of continuity of policy in regard to railway matters in India is the most important point which the present Committee has to deal with, *Conway-Gordon 4644, 4648-4651.*

Further information respecting the proposals of the Indian Government in regard to the extensions of railways, statement that the primary object held in view in drawing up Schedule A, was to protect the whole of India against famine, *Conway-Gordon 5363-5368, 5395-5402, 5409-5418, 5440-5443, 5505-5509, 5610, 5871-5886.*

Several lines which at the present time are actually under construction, *Conway-Gordon 5372-5374.*—Contention that the most unopened parts of India are exactly those which require railways, *ib. 5380-5383, 5407, 5408.*—The lines now sanctioned and under construction amount to 1,779 miles, *ib. 5409-5411.*

Explanations in detail by Major Conway-Gordon in connection with Appendix showing the lines already specifically sanctioned by the Secretary of State, the lines either directly or indirectly approved by him, and the lines which have not as yet received either his sanction or approval, *App. 853-920.*

5 Evidence of other Witnesses as to Progress desirable to be made in the Construction of New Railways:

Decided opinion that the extension of railways in India has not been carried on so rapidly as it ought to have been; the Indian Government have in fact been wanting in courage in this respect, *Chapman 740, 875.*—Distinct check which railway extension has received of late owing to the Home Government not having given the encouragement which they promised to do, *ib. 877, 878, 887-890.*

Obstacle to any large extensions out of the sum allocated of late years to public works, *Trevelyan 1576, 1577.*—Contention that the only means of feeding the people when a famine occurs is by a great extension of the railway system in the shape of protective lines, opinion that it is a question of years to carry out such a policy, it being possible only to do it by degrees, *ib. 1794-1798.*

Concurrence in the view that the extension might be at the rate of fifty or sixty millions sterling in the next five or six years, *Glover 1889-1897, 1994, 1995; Clarke 2266, 2267, 2270.*—Conclusion that railway extension is an unmixed advantage throughout the whole of India, *Glover 1949-1954.*

Report, 1884—continued.

EXTENSION OF RAILWAYS—continued.

6 Evidence of other Witnesses, &c.—continued.

Decided opinion that there should be a reasonably large and rapid extension of all public works, and especially railways, in India; expediency of expending ten millions annually for this purpose, *Wood* 2276-2278.

Much more may well be done at the present time than has been done in regard to the extension of railways, *Bullen-Smith* 2802, 2803

Decided approval of extending the railway system in India so long as it is not done so fast as to cause great fluctuations in the exchange, *Hardie* 2859-2871.

Advisability of preparing a forecast of operations in regard to railways, which should be revised from year to year; uniformity in the rate of outlay is very important towards cheap construction, *Dickens* 3048 3063 3178—Decided opinion that there is great scope for the extension of railways on the condition that economy is exercised in the construction, *ib.* 3061, 3062.

Conclusions generally as to the expediency of extending the railway system; importance of keeping railway finance more distinct from the finances of the Empire, *Birkmyre* 3350-3352. 3359-3374. 3379-3390—Opinion that the greater part of India requires opening up by railways, *ib.* 3477.

Grounds for depreciating a sudden and rapid extension of railroads in India, belief that a sudden expansion will lead to a very considerable waste of money, *Rendel* 5652-5657 5670-5673. 5867 5888—Opinion that there is no country in the world which requires railways more than India, expediency of constructing 50,000 or 60,000 miles gradually and carefully, *ib.* 5668, 5669. 5722. 5848-5850. 5991-5998. 6020-6023.

Information generally as to the different proposals put forward in regard to railway extension in India; great stress placed by the Home Government on the importance of economy of construction and the selection of lines which would not involve heavy works, *Waterfield* 6035-6040. 6309-6311. 6313-6318. 6324-6334.

Main points of difference between the Government of India and the Secretary of State in relation to the proposals of the Government in 1883 regarding the extension of railways; desire on the part of the Indian Government for a large expansion of operations, to which the Secretary of State does not assent, *Waterfield* 6085, 6086.

Expediency of obtaining foreign capital sparingly and equably; contention that sudden expansions are more wasteful than sudden reductions, *Waterfield* 6104. 6191-6195 6245-6248. 6266—Grounds for the opinion that it is not necessary that the proposed railway extensions should be carried out in five or six years; expediency of the work being done steadily, but not so rapidly, *ib.* 6267-6272.

Consensus of opinion in India that the extension of railways should be pushed on more rapidly than of late years; strong native feeling in favour of extension, *Ashburner* 6351-6354 6365-6367. 6453-6455—Disapproval of such an expansion of railway construction as was proposed by the Bombay merchants; belief that such rapidity of construction would not be economical, *ib.* 6365, 6366.

Explanation as to the means by which the Government propose to carry out their famine policy by an extension of the railway system, several new lines which it is proposed to construct to carry food from the granary districts, *Hunter* 7142-7152. 7231. 7250-7282.

Proposal by Mr. Hope (Public Works Minister), with which the Government of India do not as a whole agree, that quinquennial contracts should be entered into with the Public Works Department in regard to railway extension, grounds for this proposal, *Hunter* 7165. 7364-7377

Disapproval, on the ground of economy, of any sudden expansion of expenditure upon railways, expediency of the Government being limited to a definite scheme of construction, *Hunter* 7174-7178—Dissent from the suggestion made by General Strachey, that each case of extension should be fought out on its own merits, *ib.* 7225, 7226.

Explanation that the absence of annual profits from railways to expend on further extensions does not interfere with the proposal that quinquennial contracts should be entered into, as the Government would find the money from other sources, *Hunter* 7370-7373—Belief that, if companies do not come forward, the Government regarding the proposed lines as of such importance would themselves raise the capital and construct the lines, *ib.* 7378-7381.

Map of India showing the railways proposed by the Honourable T. C. Hope, *App* 522.

Report, 1884—continued.

EXTENSION OF RAILWAYS—continued.

6. *Exception taken by Mr Crawford to any large Extension at the present Time* .

Strong opinion that the demand for a considerable extension of railways in India is not justified and is very much exaggerated; grounds for this conclusion, *Crawford* 3660-3663 3861, 3862, 3924, 3945, 3946—Want of an extension of existing trunk lines, rather than of new lines, *ib* 3664, 3744, 4019-4021—Admission that although the intrusion of Bombay Railways into the Bengal Presidency would be opposed to the existing principle, still such intrusion would do no harm to the people of India, *ib* 3921-3926.

7 *Papers and Correspondence on the part of the Government of India and of the Secretary of State :*

Despatches from the Secretary of State, and letters in reply from the Government of India, in the period from 6th January 1881 to 29th January 1884, respecting railway extension, the progress to be made, the cost to be incurred, and the means of meeting the interest on outlay, *App.* 488 *et seq.*

Total of 3,093 miles proposed in letter from Government of India of 22nd of July 1881, *App.* 484.

Details in letter from the Government of India in January 1883, as to the several extensions then proposed, *App.* 509-523.

Total of 3,837 miles as the amount proposed to be constructed otherwise than by private enterprise, in five years subsequently to 1882-83, *App.* 524-527—Aggregate of 3,497 miles proposed to be left entirely to private enterprise, *ib.* 529-531.

Despatch from the Secretary of State to the Government of India, dated 13th December 1883, in adherence generally to the views and conclusions in previous Despatch, *App.* 559, 560.

Letter from the Government of India, dated 29th January 1884, setting forth in further detail, and summarising the views of the Government in respect of railway policy and extension; statistics submitted in support of the conclusions arrived at, *App.* 560-577.

Statement showing that on 29th February 1884 there were 3,178½ miles of railway under construction, much the larger portion being on the narrow gauge, *App.* 789.

Sanction or approval by the Secretary of State of extended construction at an estimated cost of 15,602,450 *l.*, *App.* 853 919, 920.

8. *Conclusions and Recommendations of the Committee :*

Summary of the chief recommendations of the Famine Commissioners and of their conclusions as to the railway extension required, and its cost, *Rep.* v—Reference to the mileage open, and under construction, as tending to show that the recommendations of the Famine Commission are in course of fulfilment, *ib.*

Summary of the proposal of the Government of India as to the number, extent, and cost of the lines which they consider to be indispensable for production against famine, or for other urgent purposes, *Rep.* v, vi.

Reference to the extension scheme of the Government of India as largely dependent on certain lines, to which they attach the greatest importance, being taken up by companies, considerable doubt on this point, *Rep.* ix.

View of the Committee as to the conclusive character of the evidence in favour of a more rapid extension of railway communication, *Rep.* ix.

Approval of the rate of construction proposed by the Government of India during the next six years, fair ground for expecting that extension on the scale proposed will have most beneficial effects, *Rep.* xi.

Recommendation that railways needed for protection from famine or for the development of the country be made as required, whether they be technically considered protective or productive, *Rep.* xi.

Decided opinion of the Committee that the bulk of the lines to be made should be self-supporting, *Rep.* xi.

See also *Barakur Nagpur Railway* *Bhopal to Jhansi, Gwalior, and Cawnpur.*
Bilaspur-Etawah Railway. *Bombay Chamber of Commerce.* *Branch Lines or*
Feeders. *Capital* *Central Provinces.* *Chattisgarh District.* *Condition*
of the People *Cost of Lines* *Cultivation of the Soil.* *Expenditure.*
Exports *Famines and Famine Lines.* *Gauge.* *Guaranteed Railway.*
Hope, Honourable T. C *Loans.* *Private Enterprise.* *Productive Lines.*
Protective Lines. *State Railways* *Taxation.*

F.

FAMINES AND FAMINE LINES:

1. *Concurrence of Evidence as to the Importance of Railway Extension with a view to the Relief of Famines.*
2. *Recommendations by the Famine Commissioners*
3. *Views of Sir James Caird in favour of New Lines in Populous Districts.*
4. *Loss of Life from Famines.*
5. *Expenditure upon Relief*
6. *Advantage of Railway Construction in Time of Famine.*
7. *Effect of increased Cultivation as a Result of Railway Extension.*
8. *Effect of a large Rise in the Price of Grain.*
9. *Proposals of the Government of India as regards the Construction of Famine Lines.*
10. *Arrangement respecting the Appropriation of a Million and a Half yearly by way of Famine Insurance*
11. *Question of using Part of the Famine Fund as Interest on Capital for Protective Lines.*
12. *Summary by the Committee, and Conclusions arrived at.*

1. *Concurrence of Evidence as to the Importance of Railway Extension with a view to the Relief of Famines.*

Doubt whether the relief of famine will be any less costly by the construction of 5,000 additional miles of railway, though more people would be saved from starvation, *Strachey* 162-169, 177—Opinion that no other means than the extension of railways will so effectually prevent loss of life in famines, though it is doubtful whether the cost of relief will be lessened, *ib.* 368-371.

Necessity of a large extension, over a course of years, as a protection against famine, *Trevor* 1794-1798—Preference for railways to irrigation works as regards the means of conveying food during famine times, *Lard* 2544, 2545

Contention that in the selection of future lines of railway the first consideration of the Government should be the prevention of famine, *Hardie* 2941—Impossibility of conveying produce to certain provinces at the present time, if famine were to occur, dominant consideration of the Government for this reason that they should be prepared with railways to meet such an emergency, *Westland* 4883-4887, 4915, 4964-4968.

Statement that even during a famine year there is always more than sufficient food for the population as a whole, conclusion that it is only necessary to have railways to carry food into those districts where it is deficient, *Conway-Gordon* 5429-5431.

Argument that the famine lines while mitigating famine and saving life will also help to increase produce as well as exports, opinion that the Government for this reason should raise money in this country at a low rate of interest for the purpose of making such lines, *Danvers* 7041, 7042, 7051-7057.

2. *Recommendations by the Famine Commissioners.*

Theoretical outline given in the Report of the Famine Commission in 1880 respecting the necessary extension of railways throughout India for the distribution of food in famine time; estimated requirement of something like 20,000 miles of railway if constructed fifty miles apart, *Strachey* 3, 26-28

Strong recommendation in the Famine Commission Report that railways should be extended as the chief means of providing succour in times of famine, *Sir J. Caird* 376, 377—Fulfilment practically of the recommendations of the Commissioners up to the present time as regards the annual rate of extension, it having been proposed to construct 10,000 miles at the rate of 400 miles a year, *ib.* 377-379.

Recommendation by the Famine Commission that in the construction of protective lines nothing should be attempted at the first which might divert the available funds from what is strictly essential, *Westland* 4772.

Minutes by Messrs. H. S. Cunningham, J. P. Peirce, C. E. Elliott, and H. E. Sullivan, members of the Famine Commission, now in India, on the protective character of certain lines; great importance attached to their rapid construction, *App.* 578-581.

Extracts from Report of Indian Famine Commission in 1880 with reference to the railway extension required, and the increased facilities in working, with special reference to the relief of famine, *App.* 588-591.

3. *Views of Sir James Caird in favour of New Lines in Populous Districts*

Evidence strongly in favour of the construction in the first instance of productive lines through populous districts before unproductive lines are undertaken; grounds for concluding

Report, 1884—continued.

FAMINES AND FAMINE LINES—continued.

3 *Views of Sir James Caird in favour of New Lines, &c*—continued.

cluding that this is the most effectual plan for saving lives in time of famine, *Sir J. Caird* 384-388 417-430. 503, 504.

Localities of different famines adverted to in connection with the question of population, greater advantage of protective lines in the more thickly populated districts, *Sir J. Caird* 386-403. 419-426—Dense population in several districts which have suffered from famine, instance in the case of Orissa, *ib.* 386. 403. 503, 504.

Grounds for the conclusion that on the whole famines have been more severe in densely than in sparsely populated districts, *Sir J. Caird* 569-575.

4. *Loss of Life from Famines.*

Estimate of the Famine Commissioners that the deaths from famine in Madras and Bombay, between 1874 and 1878, amounted to 5,250,000 in excess of the deaths which would have occurred had the seasons been ordinarily healthy, *Westland* 5160. 5269, 5270

Conclusion that although famines amongst large populations make the most stir in the world, they create most acute suffering amongst sparse populations, *Hunter* 7245-7249.

Statement showing the area, population, and loss of population during the famine in different districts in Ananapur, *App* 587.

5. *Expenditure upon Relief.*

Statement that the expenditure upon the Madras famine during the three years it continued was 7,804,000 *l.* as compared with that in Bengal of 6,710,000 *l.* *Westland* 5157, 5158. 5274-5276—The actual expenditure upon famine relief between the years 1873-74 and 1882-83 amounted to 14,700,000 *l.* in conventional sterling; explanation that the total cost of famine has been more than this on account of the loss to the revenue, *ib.* 5157, 5158

Average annual amount of 22,000 *l.* spent in the last three years upon actual relief of famine, total of 67,000 *l.* *Waterfield* 6145-6147.

Statement submitted by Mr. Waterfield showing the annual charge for famine relief since 1873-74, *App* 693.

Expenditure in famine relief in each year from 1873-74 to 1882-83, average of 1,470,984 *l.* for each of the ten years, *App*. 694.

Expenditure on famine relief and insurance (railways and irrigation) in each year since 1881-82, *App*. 714-717.

6. *Advantage of Railway Construction in Time of Famine.*

Statement as to the advantage of giving employment on new line *Sir J. Caird* 402 632, 633 665-670—Belief that there would be a pecuniary saving to the Government of India by making railways in time of famine, impossibility, however, to calculate exactly what such saving would amount to, *Conway-Gordon* 4287

7 *Effect of increased Cultivation as a Result of Railway Extension:*

Better position of India for resisting famines the more she is induced to grow rice, wheat, &c., by an increased foreign demand, *Sir J. Caird* 413.

8. *Effect of a large Rise in the Price of Grain.*

Conclusion arrived at by the Famine Commissioners that if prices of food rise three-fold the famine standard would be reached, argument that although exportation of wheat might go on after prices had reached a point that would cause suffering, still such prices would very quickly bring export to a standstill, *Hunter* 7207-7210. 7391.

9. *Proposals of the Government of India as regards the Construction of Famine Lines:*

Opinion that the proposals of the Government of India in January 1883 go beyond the real requirements of the country as regards protection against famine; much less extensive programme contemplated by the Famine Commission, *Strachey* 26-28.

Information generally as to the railway policy of the Indian Government with reference to food distribution and famine relief, desire of the Government for continuous broad gauge communication from the centres of food production to the centres of population and to the famine tracts, *Hunter* 7138, 7139. 7219-7227 7336. 7816.

Explanation as to the means by which the Government propose to carry out their famine policy by an extension of the railway system, several new lines which it is proposed to construct to carry food from granary districts, *Hunter* 7142-7152 7231. 7250-7282

Letter from the Government of India, dated 22nd July 1881, proposal therein for

*FAMINES AND FAMINE LINES—continued.*9. *Proposals of the Government of India, &c.—continued.*

the construction of 3,000 miles of lines designed to give protection against famine, in the next five years, with limited guarantee, interest being met from the Famine Insurance Fund, *App.* 492-495—Total of 3,083 miles proposed in letter of 22nd July 1881, *ib.* 494.

Letter from the Government of India, dated 23rd January 1883, stating conclusions as to general railway policy, submitting scheme for giving productive lines to private enterprise, and for using Famine Insurance Grant as interest for companies working with a limited guarantee, *App.* 509-545.

Repeated representations by the Government of India as to the urgent importance of pushing on lines for protection against famine, *App.* 512, 555-567.

Summary of the advantages of the several proposed lines as regards protection against famine, *App.* 524-526.

Documentary evidence and extracts from official correspondence (submitted by Major Conway-Gordon) respecting various lines advocated by the provincial governments and the Government of India, the total expenditure being estimated at 28,262,450 l.; *App.* 853 *et seq.*

Explanations in detail by Major Conway-Gordon in connection with Appendices showing the lines already specifically sanctioned by the Secretary of State, the lines either directly or indirectly approved by him, and the lines which have not as yet received either his sanction or approval, *App.* 853-920.

10. *Arrangement respecting the Appropriation of a Million and a Half yearly by way of Famine Insurance:*

Information generally with reference to the famine policy of the Government of India as far as the finances are concerned; proposal in 1878, for the first time, by Sir John Strachey, that there should be a surplus preserved annually of one-and-a-half millions for famine insurance, in addition to the 500,000 l. ordered by the Secretary of State, *Westland* 4744, 4745.

Calculation made that famine in every ten years would cost fifteen millions, which, by the surplus of one-and-a-half millions annually, would be provided for; determination of the Government of India to invest this surplus annually in productive public works, so as to avoid additional borrowing, *Westland* 4745—The estimate of one-and-a-half million annually as the average cost of famine was excessive, *ib.*

Belief that, as regards the present estimate, there will be no need for any further invasion of the Famine Fund for the purpose of guaranteeing railways, *Westland* 4994-5005.

Further examination with reference to the policy adopted in 1878 of providing an annual famine fund of a million-and-a-half in addition to the half million provided by the Secretary of State many years before, belief that this provision regards the natives from making provision for themselves, *Westland* 5139-5172, 5229-5236, 5269-5279—Policy laid down in 1881 that half of the famine fund should be devoted to protective works, and the remainder to the reduction of debt, *ib.* 5145-5153.

Statement in detail as to the origin of the Famine Insurance Fund; arrangements made by successive Secretaries of State that part of this fund should be devoted to the construction of protective works and part to the reduction of debt incurred for such construction, *Waterfield* 6046-6070, 6113-6116, 6120, 6134-6156, 6276-6278, 6296.

Explanation that the policy of the famine fund is not to endeavour to pay off the past, but to avoid the incurring of future debt; if the protective works answer the purpose of reducing the expenditure in the case of a future famine, this result will be gained, *Waterfield* 6150-6155.

Contention that the works which are to be constructed by appropriating the famine fund should be those which are strictly needed for the prevention or the relief of famine, *Waterfield* 6278.

11. *Question of using Part of the Famine Fund as Interest on Capital for Protective Lines:*

Grounds for desiring that part of the famine fund which is now used for the construction of railways, should be utilised as interest on capital borrowed to make other lines; contention that such a course would be financially sound, provided that the construction of such lines reduced the cost of future famines, *Conway-Gordon* 4141-4157, 4186, 4201, 4275, 4279-4287.

Further information relative to the proposals of the Indian Government to apply the famine fund for the purpose of guaranteeing the interest upon the railways, contention that this fund is simply intended to be an expedient for strengthening the financial position of India, *Conway-Gordon* 4582-4589—Decided opinion that devoting the
famine -

FAMINES AND FAMINE LINES—continued.

11 *Question of using Part of the Famine Fund as Interest, &c.*—continued

famine fund to guaranteed railways would not lead to any additional taxation, *Conway-Gordon* 4588, 4589

Question as to using part of the famine surplus for the payment of interest upon money borrowed for public works first raised by Lord Lytton's Government in 1879, and negatived by the Secretary of State, grounds upon which the sanction of the Secretary of State was refused, *Westland* 4745.

Views of Lord Hartington in Despatch of 8th December 1881, adverse to the formal allocation of 500,000 *l* a year from the famine insurance provision for the extension of protected lines, *App* 569

Recommendations by the Government of India in Despatch of 29th January 1884 for devoting part of the famine grant towards payment of interest on the capital expenditure proposed for certain railways, *App* 562, 563

12 *Summary by the Committee, and Conclusions arrived at.*

Establishment of the Famine Insurance Fund at the rate of 1,500,000 *l* a year, upon the basis that famine relief would cost, in every ten years, 15,000,000 *l.*, *Rep.* v—Strict adherence to the understanding that the revenue raised for famine insurance should be applied, exclusively, to the construction of works likely to avert famine, or to the reduction of debt contracted for famine expenditure, *ib.*

Summary of the chief recommendations of the Famine Commissioners, and of their conclusions as to the railway extension required, and its cost, *Rep.* v—Reference to the mileage open, and under construction, as tending to show that the recommendations of the Famine Commission are in course of fulfilment, *ib.*

Proposal by the Indian Government to appropriate an average annual sum of 200,000 *l* from the Famine Grant towards defraying the charge for interest on the capital to be raised by limited guarantee companies, *Rep.* vi—Exception taken to the foregoing proposal as implying a complete reversion of the regulations hitherto in force, as the famine grant would in part be used as interest on borrowed capital, *ib.*

Reference to the evidence of numerous witnesses as to the great importance of rapid extension of railways as the most efficient means of saving life in time of famine, *Rep.* vi, vii.

Importance attached to the evidence of Sir Thomas Seccombe in 1879 upon the question of diverting any portion of the famine insurance provision, *Rep.* ix.

The Committee consider that the hypothecation of portion of the Famine Grant would be entirely contrary to the purposes for which the fund was created, and they cannot concur in the suggestions of the Government of India on the subject, *Rep.* xii.

<i>See also Bundelkund.</i>	<i>Chatkargarh District</i>	<i>Expenditure</i>	<i>Extension of</i>
<i>Railways</i>	<i>Gauges</i>	<i>Grain</i>	<i>Guarantees and Guaranteed Railways.</i>
<i>Irrigation.</i>	<i>Jhansi-Cawnpur Railway</i>	<i>Jhansi-Manikpur Railway.</i>	<i>Loans.</i>
<i>Orissa</i>	<i>Population (Famine Districts)</i>	<i>Productive Lines.</i>	<i>Protective</i>
<i>Lines.</i>	<i>Southern Mahratta Company.</i>	<i>Wheat.</i>	

Fares. See *Rates and Fares.*

Farukhabad-Hatras Railway. Documentary evidence submitted by Major Conway-Gordon respecting this line, as proposed by the Government of India, its advantages, estimated cost, &c., sanction given by the Secretary of State, *App.* 914, 915-919.

Ferries. Contemplated use of ferries (as in America), instead of costly bridges over large rivers, in districts where the traffic is not large, *Sir J. Caird* 500, 501

See also *Gauges*

FINANCIAL CONDITION OF INDIA (SURPLUS REVENUE).

Better condition of the finances of India at the present time than in 1880, *Strachey* 4, 5—Objection to the surplus of a million being specially allocated as interest on a sum to be borrowed (say 25,000,000 *l*), witness submitting that such surplus is part of the general revenue of the State, and that it would be very unwise to appropriate a definite sum in advance for railways out of annual revenue, *ib.* 125-130, 136-144—Much larger real than nominal surplus of Indian revenues, the real surplus being reduced by the famine insurance and the payment of arrears of military charges, *ib.* 228-230.

Circumstance of one-half of the average expenditure of India during the last ten years having been provided out of other sources than taxation, such as the land revenue and opium duty, *Sir J. Caird* 658—Impossibility of developing any large railway undertakings from the resources of the Government of late years, *Trevor* 1576, 1577.

There are laid out annually enormous sums out of revenue on capital account, *Conway-Gordon* 3618—The considerable increase to the revenue under land revenue, opium, salt,

FINANCIAL CONDITION OF INDIA (SURPLUS REVENUE)—continued.

salt, Army, and all heads other than Telegraphs and Public Works, will fully justify the proposed increase of expenditure upon railways, *Conway-Gordon*, 352b

Examination with reference to the present financial position of the Government of India, explanation generally as to the method followed by witness when preparing the Reports put before the Committee upon this subject, *Westland* 4776-4784 4818-4832. 4851-4866. 4876-4878. 4931-4940—Distinction drawn between Imperial and Provincial finance, which is entirely peculiar to India, *ib* 4776.

Recovery of the country in 1882 from the disastrous effects of the famine of 1877-78, large amount of import duties remitted, and the salt-tax also largely reduced, in consequence of the improved state of the revenue, *Westland* 4776—Net result of the present financial position that upon the present balance of revenue and expenditure there is an estimated surplus of forty-eight lacs of rupees, inclusion in this estimate of the entire reservation of the famine insurance, *ib*.

The revenue of India has been sufficient during the past twelve years to provide every rupee which has been spent on famine, *Westland* 5771, 5772—Detailed statement in explanation of the extraordinary expenditure of 85,105,000*l.* from 1871 to 1883—charged upon the revenues without borrowing, *ib*. 6181, 6182 6347-6350.

Belief that if the Government be as fortunate during the next twelve years as they have been in the past twelve years, they will be able to meet the whole of the present proposals for railway construction, and have a handsome series of surpluses over, *Westland* 5183—Additional confirmation as to the method of estimating the surplus over revenue applicable to public works, low estimate on this calculation taken in respect of the estimate made, *ib*. 5331-6337.

Conclusion that the present financial position of India does not justify any very large addition to the future burden on the revenues, Opinion that the proposed expenditure upon railways of thirty-three millions during the next five or six years is not safe *Waterfield* 6207-6217—One reason for caution in regard to expenditure upon railways is that, notwithstanding the care taken in the past to avoid extravagance, the sterling debt has increased within the last fifteen years by twenty-two millions, *ib* 6289-6295.

Prosperous state of India indicated by the growing importance of gold, which has largely increased since the year 1877; *Robertson* 6550—Contention that the financial arrangements of the Government for the construction of the proposed famine lines are thoroughly sound, *Hunter* 7153, 7154, 7156, 7157 7416-7421.

Abstract Accounts of the Government of India for the year 1882-83, showing the revenue and expenditure in aggregate sums, *App* 594.

Papers and Statistics submitted by Mr. Westland containing financial details on various points, and showing the revenue and expenditure under different heads, *App* 622-646.

Revised Estimates for 1883-84, together with actual figures as to receipt and expenditure, under various heads besides railways, *App* 638, 639.

Results of twelve years' accounts, from 1871-72 to 1882-83, showing the outlay on productive public works, the ordinary revenue and expenditure, &c., *App* 646.

Statement submitted by Mr. Waterfield, showing the annual amount of abnormal charges from 1871-72 to 1882-83, *App* 693

Statement of the net disbursements of the Home Treasury of the Government of India in each year since 1867-68, and of the mode in which the disbursements were provided for, *App* 696, 697.

Unquestionably better financial position of India at the present time than five years ago, *Rep* viii

Very large overplus revenue when the pressure of war and famine ceased, this surplus having however been disposed of by the forced reforms in 1882 and 1883, *Rep* ix.

Effect of the completion of the railway to Quetta to sweep away the surplus revenue, otherwise available to Government, *Rep* ix.

See also Accounts. Exchange, Loss by. Expenditure Extension of Railways
Famines and Famine Lines Financial Results of Railways. Guarantees
and Guaranteed Railways. Land Revenue. Loans. Productive Lines.
Protective Lines State Railways. Taxation

FINANCIAL RESULTS OF RAILWAYS:

1. As to the Results hitherto.
2. As to the Future Results.
3. As to the Accounts.

1. As to the Results hitherto:

Realisation of the predictions of Lord Lawrence and Lord Mayo, there having been a gradual diminution of the railway charge, whilst in the present year there is a surplus of about

FINANCIAL RESULTS OF RAILWAYS—continued.

1. As to the Results hitherto—continued.

about a million, *Strachey* 12, 13—Evidence to the effect that the present surplus profit of a million a year in excess of the guaranteed interest is but nominal, inasmuch as it is lost to Government by the loss on exchange in connection with railway remittances, *ib* 1053-1064. 1185—Fluctuation in the profits from year to year, the surplus in 1883 having arisen in an extremely favourable year, *ib*. 1065-1074

Explanation that in calculating the net earnings and the surplus profits, arrears of interest in former years are not taken into account, amount of such arrears, these not constituting any present charge upon the finances, *Strachey* 1179-1184.—Dissect from the view that after allowing for loss on exchange and other matters, there is a net return of 4 per cent., *ib*. 1223-1226.

Statements prepared by witness explanatory of the financial position of the Government of India regarding railway expenditure; exclusion from these statements of the loss by exchange, *Conway-Gordon* 3508-3517. 3571, 3572. 3609. 3619-3622. 3641-3654—Steady gain to the Government since 1881-82 on account of railways, *ib*. 3521

Increase of the land revenue resulting from the construction of railways, *Conway-Gordon* 4268, 4269, *Ashburner* 6343, 6344. 6405-6414. 6426. 6437, 6439, *Danvers* 6887 7021, *Hunter* 7217, 7218.

Decided opinion that if the railway business of India were exhibited in accurately kept commercial accounts it would be shown to be at the present time a financial success, belief also that the lines generally will in the future pay still better, *Conway-Gordon* 3553-3556—Statement that the calculations of the Indian Government for the extension of railways are made in the hope of a continuation of profits; since 1878-79 there has been a steady increase in the ordinary traffic receipts, *ib*. 4057-4069. 4102-4106

Detailed statement in regard to the gross earnings on the trunk lines since 1866-67, showing a regular increase from year to year, entire absence of apprehension as to a disturbance of the Government scheme of extension in consequence of a decrease in the earnings, *Conway-Gordon* 4059-4069—Further statement that, including exchange, the railway do now very nearly pay their way, *ib* 4174-4178.

The estimates of revenue are most carefully examined by the financial department before the Government of India commits itself to any extension of railway works, *Conway-Gordon* 4263-4267—Indirect profit which a railway line produces from other sources than the railway itself, belief, for example, that land revenue is increased, *ib* 4268, 4269

Further statement as to the direct financial results of the transactions connected with Indian railways, grounds for the conclusion that the lines generally are now nearly paying their way, even after allowing for the loss by exchange, *Conway-Gordon* 4395-4398.

Large improvement which has taken place in the finances of the railways since 1872, *Crauford* 4003-4006

Examination as to the position of railways in regard to the general finances of India, statement that no part of the capital expenditure of productive lines is charged against revenue, *Westland* 4931-4940. 5034-5047 5061-5066. 5100-5114 5173-5182. 5237-5253. 5262-5268. 5315-5321—Admission that the policy of the Government has been to spend out of revenue as against capital on railways, *ib*. 5028-5030—Explanation as to the course adopted in the case of railways upon which the expenditure has been charged to revenue, and which afterwards become productive, *ib*. 5040-5047 5280-5287.

Prosperous condition of the Indian railways generally, assertion that if taken together they are paying more than the interest of the money raised to carry them out, *Rendel* 5793-5795

Information generally respecting the working of the railways; opinion that the results are very encouraging as showing improved returns and an expansion of traffic, *Danvers* 6866-6870 6906-6915 6931-6939 6969-6981—Further examination in regard to the results of the railways, contention that it is fair to look to the profits on existing lines as a source from which interest may be paid on the capital for future lines, *ib* 7003-7009. 7016-7027. 7058-7068.

Statements showing the direct annual gain or loss to the State from railway outlay since 1858, *App* 500 558 750.

Observations of the Government of India, under date 4th January 1834, summarising various financial results in connection with railways, and showing the net revenue, *App*. 582, 583.

Report, 1884—continued.

FINANCIAL RESULTS OF RAILWAYS—continued.**1. As to the Results hitherto—continued.**

Despatch from the Secretary of State to the Government of India, dated 27th May 1884, containing explanations on the question of profit from the railways in connection with the loss on the exchange, &c., *App* 702, 703

Memorandum attached to Despatch of 27th May 1884, together with tabular statistics, in support of the conclusions arrived at by the Secretary of State in Council, *App*. 704-709.

Telegraphic communication from the Governor General, dated 22nd June 1884, submitting grounds for dissenting from certain conclusions embodied in Financial Despatch from the Secretary of State of 27th May 1884, *App* 700, 701

Statistics in detail submitted by Major Conway-Gordon respecting expenditure on public works of different classes, and the revenue thereon, *App*. 714 *et seq*.

Statement showing the cost and general results of working of each Indian railway in each year from the commencement down to the present time, *App* 770-781

Paper submitted by Major Conway-Gordon showing the financial results of the transactions connected with the working of the railways generally, distinguishing between the guaranteed railways and the State railways, *App* 852

Large aggregate represented by the annual charge imposed on the revenues by the railway policy hitherto, improved conditions in recent years, many of the lines paying excellent dividends on the heavy capital outlay, *Rep* viii—Reference to the railway accounts for 1883 as showing that, irrespective of loss by exchange, the return on the whole railway investment of India was 5.68 per cent., *ib* x.

2 As to the Future Results.

Liability to fluctuation in the annual surplus, so that a million a year cannot always be depended upon, *Strachey* 326-333.

Conclusion that if there be any risk in respect of new lines the Government must accept it, it being financially unwise to induce English capitalists to enter upon unsuccessful railway speculations for the benefit of India, *Sir J. Caird* 391-393.

Considerable ignorance of the English people in regard to the circumstances of Indian railways, *Chapman* 744. 879-881.—Explanation that the guarantee proposed to be given is only nominal, brief period of nursing and development only required in the case of Indian railways, *ib* 787-791.—Argument that if the Indian railways, notwithstanding such disadvantages as the loss of back interest and losses on exchange, can earn 4 per cent., it is a strong reason to go on increasing their number, *ib*. 940-942

Anticipation that when the feeder lines are better developed the financial results of railways, taken as a whole, will be better than they have been in the past, *Trevor* 1789, 1790.—Probability that some of the new lines undertaken by the Government will not pay, which fact must be faced in the interests of the country; assertion on the other hand that other lines may be built very freely as feeders, upon which good returns are certain, *ib* 1793

Statement that at the present time there is a growing revenue from railways, which growth may be calculated to go on, *Dichens* 323

Admission that the estimate put before the Committee by witness would be very seriously affected if a famine were to occur, belief that such an event would swallow up the annual increase of revenue for a year or two, *Westland* 4831, 4832.

Statement that in estimating the surplus available for railway construction the Government have excluded wars, and have assumed that famines are sufficiently provided for; belief that during the last ten years the number of years adversely affected by political accidents was not a large proportion, *Westland* 4931-4940

Probability of the lines being remunerative in the future if they are constructed economically and managed skilfully, *Danvers* 6883 6931 6933.

Statement containing estimates of cost and of net revenue in the case of each railway with which the State has current accounts, *App* 534, 535

Estimated net revenue of each of the guaranteed and State railways for the several years 1883-84 to 1887-88, *App*. 534, 535.

Estimate of productive public works receipt and expenditure for each year from 1883-84 to 1887-88, *App*. 544, 545.

Further estimate (revised) of the cost and net revenue in the case of the several lines under construction, and of the several projected lines, *App*. 584, 585

3. As to the Accounts :

Recommendation by the Committee that the accounts of the financial results of the railways

Report, 1884—continued

FINANCIAL RESULTS OF RAILWAYS—continued.

3. As to the Accounts—continued.

railways should be kept in such a manner, and so published, as to be easily available to and understood by the investing public, *Rep xi*

See also *Accounts* *Capital* *Cost of Lines* *Exchange, Loss by* *Expenditure*
Extension of Railways *Famines and Famine Lines.* *Financial*
Condition of India *Gauge* *Guarantees and Guaranteed Railways.* *Land*
Revenue *Loans* *Madras Railway.* *Productive Lines* *Pro'ective*
Lines *State Railways* *Taxation* *Traffic* *Working Expenses*

First Class Fares Statement that the first-class fares on the Indian railways pay practically nothing in proportion to the rest of the traffic, the proportion being less than half per cent. on the whole of what is carried by the East Indian Railway, *Crawford 3792.*

See also *Rates and Fares.*

Food Explanation that two-thirds of the people of India live upon grain, other than wheat, and only one-third upon rice, *Sir J. Caird 528.*

See also *Cultivation of the Soil* *Famines and Famine Lines* *Grain* *Rice.*
Wheat.

Forecasts of Expenditure Approval of making forecasts of expenditure, but not of revenue, for longer periods than five years, expediency at the same time that the Government should hold itself free to adjust its expenditure to any altered circumstances, *Waterfield 6193-6195 6218-6220 6319-6321*

Grounds for considering it desirable that forecasts of railway construction should be made every year embracing estimates for the five succeeding years, *Danters 6673 7072.*

See also *Expenditure (Railways)* *Extension of Railways*

France Reference to the cost of construction of railways, per mile, in France, the amount of public debt per head of population, and population served by each mile of railway, *Sir J. Caird 414*

Frontier Railways Total of 4,112,000 l. as the expenditure on frontier railways in the last twelve years, *Westland 5181.*

Statement showing the expenditure and estimated expenditure in respect of the Punjab Northern State Railway and the Kandahar State Railway since 1879-80, *App 72*

Gaekwar of Baroda's Railway Statement showing for each year the mileage, average age, cost, and general result of working, *App. 780*

Ganges (Ferry Boats) Impossibility of transferring large waggons from one side of the Ganges to the other by means of ferry boats, on account of the frequent variations in the level of the water, *Conway-Gordon 4574-4579*

GAUGE.

- 1 *Circumstances under which the Narrow or Metre Gauge was first introduced*
- 2 *Mileage Constructed, or under Construction, on the Broad and Narrow Gauge, respectively*
- 3 *Relative Cost of the two Gauges as regards Construction.*
- 4 *Relative Cost of Maintenance and Working*
- 5 *Relative Capacity and Results as to Traffic*
- 6 *Extent to which the Broad Gauge or the Narrow Gauge should be adopted in future Construction*
- 7 *Break of Gauge, Inconvenience and Cost involved.*
- 8 *Suggested Decision by the Committee as to the Gauge to be adopted.*
- 9 *Recommendations by the Committee*

- 1 *Circumstances under which the Narrow or Metre Gauge was first introduced.*

Belief that when the narrow gauge was sanctioned no one had any idea of the great development of traffic which would take place in India, the official views at that time were that the Indus Valley and the Rajputana lines would not pay, *Conway-Gordon 4329, 4330.*

GAUGE—continued

1. *Circumstances under which the Narrow or Metre-Gauge, &c.—continued.*

Original proposition of the narrow gauge in India by an engineer in the service of the East Indian Railway Company, named Wilson, construction by him of a narrow gauge line from Nulhatti to Azimgunge at a cost of about 4,000 *l.* a mile, *Rendel 5624*.—Main object of the introduction of the narrow gauge to save cost in construction, rather than in working, *ib.*

Committee appointed in 1870 to decide as to the width of the narrow gauge to be adopted permanently; constitution of this committee, who decided in favour of the metre gauge, 3 feet 3½ inches, *Rendel 5624*.

2. *Mileage Constructed, or under Construction, on the Broad and Narrow Gauge, respectively.*

Statement showing the mileage open for traffic on 29th February 1884, distinguishing between broad gauge, metre gauge, and other gauges, *App. 788*.

Statement showing the railways under construction on 29th February 1884 on the broad gauge and narrow gauge, respectively, *App. 789*.

Total of 2,563½ miles being constructed (on 29th February 1884) on the 3 feet 3½ inches gauge, as compared with 486½ miles on the 5 feet 6 inches gauge, *App. 789*.

Total mileage on 31st December 1882 of broad gauge lines, and of metre gauge, &c., *App. 796, 797*.

3. *Relative Cost of the two Gauges as regards Construction.*

Indirect effect of the metre gauge in leading to much less cost in the construction of lines on the broad gauge, *Sirachey 151-154*.—Estimate of from 8,000 *l.* to 9,000 *l.* per mile as the present cost of making a broad gauge line, the cost of a metre gauge line being from 5,000 *l.* to 7,000 *l.*, much greater cost for the older lines, *ib. 1230-1238*.—Belief as to the cost of narrow gauge lines being 50 per cent. less than that of the broad gauge, *Sir J. Card 451, 497-499*.—Difference of cost in the proportion of 1,500 *l.* to 2,000 *l.* per mile, slight difference in respect of bridges, *Trevor 1680-1683 1782, 1783*

Information respecting the relative cost of broad and narrow gauge lines in various districts, statement that the cost of converting narrow into broad gauge would be almost as much as constructing a new line, especially as regards the bridges, *Glover 1839-1844, 1933-1937 1966, 1967 1972-1978*

Reference to the cost of the Bengal Central and Bengal North Western lines, respectively, as illustrating the difference between the expenditure entailed by the broad and by the narrow gauge, the former being estimated at one-third more than the latter, *Dickens 3100-3109, 3197-3211*.—Comparison of the relative cost of the broad and narrow gauge, including rolling stock and stations, this is about as 1,500 *l.* to 2,000 *l.* in favour of the narrow gauge, *ib. 3197, 3198, 3222-3224*.

Difference in the cost of construction of the metre gauge and the standard gauge lines, the actual difference in favour of the former is from 1,500 *l.* to 2,000 *l.* a mile, inclusive of rolling stock in both cases, *Conway-Gordon 4335*

Trifling difference of cost except in the case of low-priced lines, *Rendel 5624*.—Cost of about 6,000 *l.* a mile for broad gauge lines, and of 4,500 *l.* for narrow gauge, *ib. 5624 5675-5688, 5938-5948*.—Opinion that the disadvantages of a mixed gauge do not outweigh the comparative cheapness of the metre gauge, *ib. 5889-5892*

Further information respecting the difference in the cost of construction between broad and narrow gauge, belief that this is not so much as stated by Mr. Rendel, *Conway-Gordon 6718, 6788-6834*.—Considerable effect which the weight of rails has upon the relative cost of broad and narrow gauge, *ib. 6789-6796, 6810-6814*.

Contention that if light broad gauge instead of narrow lines be constructed there need be very little difference in the mileage opened in the next few years; opinion that with the present price of iron the difference in cost would not amount to as much as 350 *l.* to 500 *l.* a mile by adopting light broad gauge lines, *Conway-Gordon 6801-6805 6834*.—Statement that for light broad gauge lines there would be no increased cost for bridges, conclusion generally that the same bridges and the same rails will do for light broad gauge as for narrow gauge lines, *ib. 6815-6824*.

Comparative statement (submitted by Major Conway-Gordon) showing the cost of construction of the several broad and narrow gauge lines, respectively, based on the capital outlay on 31st December 1882, *App. 796, 797*.

4. *Relative Cost of Maintenance and Working:*

Consideration of the cost of working broad and narrow gauge lines, respectively; the running

Report, 1884—continued.

GAUGE—continued

A. *Relative Cost of Maintenance and Working*—continued.

running charges with the exception of coals, are almost double on the metre gauge to what they are on the broad gauge, *Trevor* 1684-1687 1784-1788—Greater cost of maintenance on the narrow than on the broad gauge, in proportion to the traffic, *ib* 1739-1746

Explanation that the cost of haulage on the narrow gauge system is more expensive than on the broad gauge, *Glover* 1850 1968-1971—Belief that the working of broad gauge traffic is less expensive than narrow gauge working, *Bythell* 2711.

Information as to the comparative cost of working the standard and the metre gauge lines, statistics showing that the working expenses of the narrow gauge line are heavier than on the broad, *Conway-Gordon* 4653-4659 4717-4726—Admission that the cost of construction, but not the working, of narrow gauge is more economical than broad gauge lines, *ib* 4745, 4716, 4720—Opinion expressed by the Government of Madras as to the absence of economy in the working of narrow gauge as compared with broad gauge lines, *ib* 4720.

Further information generally on the subject of the comparative cost of the working upon broad and metre or narrow gauge railways in India; assertion that the cost of working locomotives on the metre gauge is considerably higher than on the broad gauge, *Conway-Gordon* 6720-6781, 6785-6787, 6839-6844.

Belief that it is generally admitted that metre gauge lines work their passenger traffic with less dead weight than the broad gauge, as regards good traffic the dead weight is practically the same on both gauges, *Conway-Gordon* 6773-6781—Great disproportion on the broad gauge lines which the dead weight bears to the freight on account of the antiquated character of the broad gauge rolling stock, *ib* 6781.

Explanation that the large difference between broad and narrow gauge as regards maintenance is materially affected by the age of the line, *Conway-Gordon* 6782-6784—The lesser cost of the wagon and carriage traffic on the metre than on the broad gauge lines is to be entirely accounted for by the fact that on the narrow gauge lines the stock is all new, *ib* 6785, 6786.

Memorandum as to the relative cost of rolling stock on broad and metre gauge railways, *App* 605-607

Abstract statistics of the cost of working, under different heads, distinguishing between broad gauge and narrow gauge lines, *App* 798 *et seq.*

5. *Relative Capacity and Results as to Traffic.*

Capacity of the broad gauge, as compared with the narrow, in the proportion of one and half to one, *Strachey* 155-158—Belief that there has been no check to the expansion of traffic through the adoption of the narrow gauge, *ib* 295-298—Better speed on the broad than on the metre-gauge, *Trevor* 1688-1691.

Belief that there will in India be no traffic that cannot be carried upon a narrow gauge line, *Kendel* 5624—Statement that the metre gauge has developed railway traffic in India to a degree that at starting was never anticipated, *ib* 5628—Grounds for the belief that the metre gauge is entirely sufficient to carry any traffic that is likely to be brought upon it, *ib* 5899-5908

Facility with which alterations could be made so as to enable heavy traffic to pass over a lightly constructed line, *Conway-Gordon* 6798-6800.

Results of the working of the goods traffic of the Rajputana-Malwa metre gauge line, compared with that of the Bombay and Baroda and other broad gauge lines, disadvantages of the former, *App* 603-605

Average traffic passing over each mile daily in 1882, distinguishing between passengers and goods, and between broad gauge lines and narrow gauge lines, *App* 651, 652—Result that the average passenger traffic is fifty per cent. greater on broad gauge lines than on narrow, and the average goods traffic nearly four times as great on the former, *ib* 652

6. *Extent to which the Broad Gauge or the Narrow Gauge should be adopted in future Construction*

Proposed use of the metre gauge for feeders to the main lines, *Sir J Caird* 402 408, 516—Sufficiency of the narrow gauge for providing relief in time of famine, *ib* 408—Approval of the broad gauge generally if the difference in cost is only ten per cent., *ib* 516, 635

Undoubted opinion that all through communication lines in India should be broad gauge, contention that it is fatal to attempt to propose a different gauge in great arterial communications, *Chapman* 761-764 873, 874 935, 936.

GAUGE—continued.

6 Extent to which the Broad Gauge or the Narrow Gauge, &c.—continued.

Considerations generally as to the gauge most suitable for Indian railways, in difference of the Liverpool merchants as to the particular gauge so long as there is no break of gauge, *Coke* 1292. 1308-1311. 1343-1349 1413-1417. 1510, 1511—Non-objection to the metre gauge upon feeder lines, or what may be termed local lines, *ib.* 1294.—Grounds for the opinion that it would be well that all the metre gauge lines should be altered into broad gauge, belief that if this be done the traffic will be largely developed, *ib.* 1310, 1311.

Non-objection to railways on the metre gauge in the South Malhratta country, *Trevor* 1568—Distinct advantage of the metre gauge in Burmah, and also in Northern Bengal, *ib.*

Strong opinion that in the north of India the railways should be entirely constructed on the broad gauge, *Glover* 1845. 1853-1858—Approval of the narrow gauge in districts where the probability of large traffic is not very great, and where the system is isolated, advantage of using the narrow gauge in the Kattywar district, *ib.* 1846, 1847 1966, 1967. 2009-2012

Disapproval of the metre gauge lines even as feeders to lines on the broad gauge, *Glover* 1849 2154-2156—Approval of the metre gauge for light railways through countries not thickly populated, and where there are not heavy long-leads for haulage, *ib.* 2039-2041—Opinion that the most desirable gauge for the whole of India would have been the English gauge of 4 feet 8½ inches, *ib.* 2040.

Strong opinion that the lines to be constructed should be on the metre and not on the broad gauge, contention that there is a great aggregate saving in metre gauge as opposed to broad gauge lines, *Wood* 2283-2285 2288, 2289 2295

Desirability of making all the main lines in North India upon the broad gauge, *Bullen-Smith* 2326—Impotence of confining the metre gauge to small systems, through hilly districts, and to feeders to the main lines, *ib.* 2326, 2327 2373-2376.

Decided opinion that it would be a disastrous arrangement if the narrow gauge were to be adopted upon any of the main lines of communication, contention also that all the railways in the great plains of Northern India should be on the broad gauge, *Lard* 2478, 2479 2534-2536—The metre gauge should be entirely confined to self-contained systems, *Bythell* 2711, 2712.

Inexpediency of extending metre gauge lines except as feeders in very isolated districts, belief that this gauge is exceedingly unpopular, not only with merchants, but with the natives themselves, *Birkmyre* 3341-3349

Considerations as to the principle which should govern the question of gauge; strong opinion in favour of the standard gauge for all through lines, and for all short connections between existing broad gauge lines, *Conway-Gordon* 4326-4334 4338-4344—The character of gauge should depend entirely upon the amount and description of the traffic which may come upon the line, *ib.* 4326—Opinion that metre gauge lines are most suitable for isolated portions of the country when the probable traffic is not sufficient to justify the greater cost of standard gauge lines, *ib.* 4341-4343.

Further information relative to the great advantages of the broad gauge for Indian Railways; absence of economy in the narrow gauge, the question of expense being more a function of the weight of traffic than of the gauge, *Conway-Gordon* 4421-4452. 4461-4464. 4564-4574 4592, 4593—Metre gauge lines are more suitable for isolated parts of the country where a complete metre gauge system can be adopted, *ib.* 4428 4461-4464—Grounds for preferring broad gauge to metre gauge for branch-feeder lines, *ib.* 4429—Contention that even for hilly country, broad gauge lines are more advantageous than the narrow gauge, *ib.* 4430-4439

Opinion that the advantage of narrow gauge in respect of facility to get round curves is but a small one, as these difficulties are being gradually overcome by scientific construction, *Conway-Gordon* 4564-4568—Detailed statement of the differences generally between the Secretary of State and the Government of India on the subject of the two gauges, *ib.* 4597-4615 4620-4624—Expediency of giving the Indian Government liberty to adapt the broad gauge only, except in some isolated districts, *ib.* 4625

Importance of duly considering the question of gauge in connection with the expenditure, so as to avoid the necessity of fresh taxation, *Conway-Gordon* 4695-4701. 4731, 4732—Approval of converting the existing narrow gauge lines into broad gauge; contention that the expense would not be so great because the whole of the materials could be utilised on other narrow gauge lines, *ib.* 4713, 4714.

Information generally respecting the origin, advantage, and extension of the metre gauge system in India; grounds for the conclusion that all railways remaining to be made, with some exceptions, should be concluded on this gauge, *Rendel* 5624, 5625.

GAUGE—continued.

6. *Extent to which the Broad Gauge or the Narrow Gauge, &c*—continued.

5710-5717 5788-5792. 5851-5854 5873-5875 5889-5893 6011, 6012—Expediency that in all future extensions uniform gauge should be aimed at, that is, narrow gauge, *Rendel* 5898—Belief that large districts may be covered with narrow gauge lines, which districts would never be protected if broad gauge were insisted upon, *ib*.

Grounds for advocating the construction of light lines on the broad gauge, argument that broad gauge, even though at a slightly increased rate, is preferable for the purposes of the expanding trade of the country, *Conway-Gordon* 6718. 6812-6834. 6839-6841.

Opinion that the gauge of each future line should be determined according to its special circumstances; expediency of having the chief trunk lines upon the broad gauge, *Danvers* 6888 6893, 6894.

Railways proposed by the Government of India in January 1883, distinguishing in each case between the broad gauge and metre gauge, *App.* 524-531.

Gauge proposed for the several lines to be left to private enterprise, *App.* 529-531

Views of the Bengal and Bombay Chambers of Commerce on the question of gauge, and the respective merits of the broad and metre gauges, advantages of the broad gauge for main lines, *App* 596. 599, 600.

Sundry details upon the subject of gauge, population, traffic, &c., in the case of various lines advocated by the Provincial Governments and the Government of India, at an estimated expenditure of 28,262,450 *l*; *App.* 853 *et seq.*

7. *Break of Gauge, Inconvenience and Cost involved.*

Advantage if the narrow gauge lines were grouped together so as to avoid break of gauge, *Strachey* 300, 301—Estimate that the cost of break of gauge is not greater than the cost of ten miles of transport exceeding small addition thereby to the cost or price of grain, *ib.* 302, 303, 342—Inconvenience as well as expense entailed by break of gauge, it being, however, expedient to continue for some time to come both the metre gauge and the five feet six gauge, *ib* 341-345

Great hindrance to the traffic when there is a break of gauge on a main or through line, *Sir J. Caird* 407, 409—Doubt as to much advantage from the provision of storage for wheat at places where there is a break of gauge, 594-597.

Further consideration of the cost and delay involved by break of gauge, the actual cost of transfer being computed as about equivalent to ten extra miles, *Strachey* 1153-1178.

Views of witness on the question of the relative merits of the broad and narrow gauge; strong objection to a break of gauge even in the case of a very short feeder, *Trevar* 1563-1568 1811-1818—Possibility of putting a third rail on the standard gauge lines in order to run metre gauge trains; decided objection thereto, *ib* 1811-1813.

Disapproval of a break of gauge on any of the main trunk lines, especially in the north of India, contention that to adopt a third line would be a better mode of working the traffic than the present system of changing the load from one truck to another, *Glover* 1848 1851, 1852 1973 1993

Strong objection to breaks of gauge on Indian railways, *Lord* 2478, *Bythell*, 2711, 2712—Decided depreciation of a break of gauge, all lines except small separate systems should be on the broad gauge, *Graham* 2737-2740.

Disapproval of a break of gauge as between a feeder and a trunk line, the decision as to the gauge of the proposed line from Kismu to Calcutta is to remain with the Government, *Crawford* 3857-3897, 3967, 3968, 4007, 4008.

Uniformity of gauge adopted as a principle when railways were first started in India, circumstances under which break of gauge was first permitted, *Conway-Gordon* 4327-4330—Statement that the mercantile community in India is unanimously opposed to a break of gauge, desire also on their part for the broad as opposed to the narrow gauge, *ib* 4339, 4340—To the north and east of the Gogra and the Ganges there must be of necessity a break of gauge, *ib* 4573

Examination with reference to the subject of the inconvenience of break of gauge; grounds for the opinion that there is no evil beyond the mere cost of transfer, *Rendel* 5629-5636. 5704, 5709 5796-5804. 5884-5886 5895-5897. 6016. 6027. 6028—Contention that the amount of break of gauge in England is far greater in proportion than it is in India, *ib.* 5629-5933—Explanation that on the Rappootana Railway the cost of break of gauge is about equivalent to the cost of constructing and working ten miles of railway, *ib* 5634-5636

Explanation of the indirect evils of a break of gauge; enormous wastage on account of the goods lying about in the open, *Ashburner* 6470-6472. 6538-6544.

GAUGE—continued

7. Break of Gauge, Inconvenience and Cost involved—continued.

Belief that the only trustworthy evidence regarding the disadvantage of a break of a gauge would be that of the trade which uses the line, strong feeling against a break of gauge felt by the trade in the case of the Cardigan and Carmarthen and the Great Western lines in England, *Conway-Gordon* 6719.

Evils of a break of gauge considered so grave that in making a military line to the frontier continuously broad gauge is rightly insisted upon, argument that to meet such an enemy as famine, which strikes every few years, continuous broad gauge is also necessary, *Hunter* 7411-7415.

Strong objections by the Bengal and Bombay Chambers of Commerce to break of gauge, great inconvenience and cost entailed, *App* 596, 600.

Extract from communication addressed to the Bombay Chamber of Commerce as to the cost and inconvenience of transhipment at breaks of gauge, *App* 607.

8 Suggested Decision of the Committee as to the Gauge to be adopted

Evidence as to the great importance of laying down a principle in regard to the adoption of broad or narrow gauge in certain parts of India, contention that this question should be seriously faced by the present Committee, and should not be left either to the Government of India or to the Secretary of State, *Conway-Gordon* 4595-4615 4620-4624. 4645-4659. 4694 4712-4716.

9. Recommendations by the Committee :

Opinion of the Committee that all the leading trunk lines, with their principal feeders, should be on the broad gauge, *Rep* x.

The metre gauge should be, as a rule, confined to tracts of country where that system is already in successful operation, and to local lines where the traffic is likely to be so light that cheapness of construction more than counterbalances the undoubted disadvantage of break of gauge, *Rep* x.

See also *Jhansi-Manikpur Railway Nagpur and Bengal Railway. Rajputana-Malwa Railway*

Gaya-Toree Railway (Bengal). Length and cost of this project, as proposed by the Government of India to be left to private enterprise, *App* 530

Glover, Thomas Craigie (Analysis of his Evidence).—Large experience of witness in the construction of railways, he having been for twenty years a public works contractor in India, he has, in a period of twenty-three years, visited the country forty-two times, 1827-1831 1834.

Enumeration of the various contracts which witness has carried out in India, construction by him at the present time of the Bhopal State Railway on the broad gauge, 1832-1838 1860-1864. 1846. 2016-2028 — Information respecting the relative cost of broad and narrow gauge lines in various districts; statement that the cost of converting narrow into broad gauge would be almost as much as constructing a new line, especially as regards the bridges, 1839-1844 1933-1937 1966, 1967. 1972-1978.

Strong opinion that in the north of India the railways should be entirely constructed on the broad gauge, 1845. 1853-1853 — Approval of laying the narrow gauge in districts where the probability of traffic is not very great, and where the system is isolated, advantage of using the narrow gauge in the Kattywar district, 1846, 1847. 1966, 1967. 2009-2012.

Disapproval of a break of gauge on any of the main trunk lines, especially in the north of India, contention that to adopt a third line would be a better mode of working the traffic than the present system of changing the load from one truck to another, 1848. 1851, 1852. 1979-1993 — Disapproval of metre gauge lines, even as feeders to lines on the broad gauge, 1849 2154-2165 — Explanation that the cost of haulage on the narrow-gauge system is more expensive than on the broad gauge, 1850. 1968-1971

Opinion that to build a railway from Bhopal northwards to Gwalior and Cawnpur on the metre gauge would be suicidal, as there would be three breaks of gauge, 1852 — Statement that the country which the Bhopal State Railway is to traverse is populous and well cultivated; opinion that it is in no sense a poor country, 1866-1871. 2043, 2044. 2047-2060. 2149-2166

Description of the work on the Bhopal Railway; two important and expensive bridges to be constructed on this line, 1872-1874, 1878 2078-2084 — Belief that there is no part of India where a line could be more profitably worked than the country through which the Bhopal line passes; contention that it will pay interest within two years after construction, 1875-1877. 1879, 1880.

Great obstruction met with by witness in his dealings with the official engineers of the Government, instances in support of this statement, 1881-1888 1923-1932 2013-2015. 2029-2035. 2061-2070 — Opinion that there is too much "red tape" in the public works system under the Government, 1882 — Less practical knowledge possessed by

Glover, Thomas Craigie. (Analysis of his Evidence)—continued.

by the Government engineers than by those employed by private companies, 1882—Belief that the system of obstruction by the executive officers is almost general on the State lines, 1885-1887.

Decided opinion that the present financial position of India fully warrants a more rapid extension of the railway system than has taken place in the last few years; assertion that an expenditure of from fifty to sixty millions in the next five years is quite possible and entirely judicious, 1889-1897. 1994, 1995.

Grounds for the opinion that directly a line is opened the revenue of the country is increased in proportion, contention that in India the railway makes the country, not as it is in England, where the country makes the railway, 1890 1898 1945 1954. 2071-2073 2167-2174 2243

Important influence of railways on cultivation in the districts through which they pass; absence of desire on the part of the natives to raise more grain than they require for themselves when they have no means to take it away to a market, 1890. 1905, 1906. 1944. 1945. 1949-1954 1962-1965. 2071-2075. 2134 2158 2163-2166 2247-2251

Great importance of the extension of railways in the effect upon the labour market in India, belief that in many instances the wages would be doubled, 1895, 1896 1910-1922 1938-1943. 1955-1961 1996-1999. 2002-2008—Opinion that if the Government continue to spend only four millions a year the price of labour will not be much increased, 1918, 1919—Statement that though all the superintendents are Englishmen and Scotchmen, the whole of the actual work, including the construction of the largest bridges, is done by natives, 1920-1922

Necessity in the case of Government works for witness to add 10 per cent. to his rates because of the obstruction met with from the executive engineers, 1927-1932. 2111-2122—Belief that Indian labour might be very much more utilised than it is at present upon railway works, 1938-1940—Unusually low price of railway materials, especially iron, at the present time, 1947. 2191-2200. 2241, 2242.

Conclusion that railway extension is an unmixed advantage throughout the whole of India, 1949-1954—Decided opinion that railways do not displace any of the native industries in connection with carriage; contention, on the contrary, that native carriers are more constantly employed as the result of a railway coming through a district, 1953. 2000, 2001—Assertion that if the rolling stock of the narrow gauge lines were differently designed, they would carry much more dead weight than they do, 1969-1971.

Rough calculation that it would cost about 10,000 rupees a mile to lay down an additional rail so as to avoid the inconvenience of a break of gauge, 1974 19 78—Statement that native labourers, though more sober than Europeans, are not so trustworthy in money matters, 2004-2006—Construction of the Bhopal line on the broad gauge to satisfy the Begum, who was jealous because Scindia had his line made broad gauge to Gwalior, 2024-2026.

Grounds for believing that certain work on the Great Indian Peninsula line failed, not through scamping by the contractors, but from the fault of the specifications, unsuitable materials used by the engineers in the construction of the bridges of this line, 2030. 2066-2070 2138-2142. 2142. 2261-2263—Instance in which a serious disagreement arose in relation to a defective weighing machine, the cost of the repair of which was charged to witness by the Government, explanation that this friction was caused by the action of an inexperienced engineer, 2033-2035. 2107-2110. 2143, 2144.

Approval of the metre gauge for light railways through countries not thickly populated, and where there are not heavy long leads for haulage, 2039 2041—Opinion that the most desirable gauge for the whole of India would have been the English gauge of 4 feet 8½ inches, 2040.

Statement that the district between Jhansi and Cawnpur may be called one field of grain, extending a few miles only from the trunk road, plenty of land available for cultivation beyond this limit, 2048-2051. 2056, 2057 2163-2166.

Extraordinary development of the Rajpootana country caused by the making of the making of the railway through it, 2074-2077—Very heavy increase in the cost of construction of railways in India which will take place if the work be delayed until the prices of materials are much higher than at present, 2081-2084.

Further examination in regard to the available local labour in India, and the tendency for its cost to increase, explanation that the cost of coolie labour being so small, the proposed extension of railway work would not affect it very much, 2086-2097 2150-2153 2201-2203 2244-2246—Information as to the character of the coal in the neighbourhood of the Rewah Railway, 2098-2105. 2133, 2134

Additional evidence respecting the inconveniences resulting from the constant friction
284. 6 O 2 between

Glover, Thomas Craige. (Analysis of his Evidence)—continued.

between the contractors and the Government engineers; instance of a firm of contractors obliged to leave India and give their contract up from this cause, 2111-2122. 2207-2240.

Decided opinion that the Jhansi, Gwalior, and Cawnpur is a line which should induce capitalists to support it without a Government guarantee, intention of witness to invest largely in it whether he makes the line or not, 2128-2131—Expediency that every engineer engaged on works of construction in India should have previous experience either in that country or in England, 2145, 2146—Efficiency of native engineers who have been educated and trained in the Indian Engineering College, 2147-2149

Statement that in those districts in India which can never be cultivated, witness would not advise the construction of a railway, 2158—Small amount of irrigational works which have been carried out in the country west of Agra, 2174-2177.

Information respecting the relative cost of rails per mile for the broad and narrow gauge, difficulty which would be experienced in placing a third rail on broad gauge lines, because of the special sleepers used, 2178-2190—Importance of a rule being laid down by the Director General of State Railways that no executive engineer or engineer-in-chief should be appointed to supervise a contract, unless he has had previous experience in India, 2223-2240.

Enormous increase in the cultivation in the district between Nagpur and Bhusawal, since the construction of the Great Indian Peninsula line, 2247-2249—Statement that the cost of maintenance on the broad and narrow gauge is identically the same, very small amount of difference between the general staff expenses on the two gauges, 2252-2260.

Godra-Rutlam Extension. Expediency of extending the existing line from the Bombay and Baroda Railway to Godra as far as Rutlam, *Lord* 2475, 2476.

Gold. Conclusion that our import trade from India is, to a large extent, balanced by the exports of gold and silver from England to India, *Coke* 1514-1521—Prosperous state of India indicated by the growing importation of gold, which has largely increased since the year 1877, *Robertson* 6550

Goods Traffic. Statement that the lines which pay best are those which rely chiefly on goods traffic, *Dichens* 3318.

Average traffic passing over each mile daily in 1882, distinguishing between passengers and goods, and between broad gauge lines and narrow gauge lines, *App.* 651, 652.

Comparison between the East Indian, the Great Indian Peninsula, the Rajpootana, Malwa, and the Bombay, Baroda, and Central Indian Railways in 1883, and in other years when the traffic on the other lines approximated to that of the Rajpootana-Malwa in 1883, *App.* 653.

Abstract statistics of the carrying capacity of each line as regards goods traffic in each half-year from 31st December 1880 to 30th June 1883, *App.* 816-821

See also *Traffic.*

Gooty District. Statement showing the area, population, and loss of population, during the famine in this district, *App.* 537.

Government Control. See *Administration and Management.* *Construction Guarantees and Guaranteed Railways* *Rates and Fares.* *State Railways.*

Government of India. See the *Headings generally throughout the Index.*

Graham, Donald. (Analysis of his Evidence.)—Witness has been for many years in business as a merchant in India; is also in extensive business in Liverpool and Manchester, 2713, 2714.

General concurrence with the evidence given by previous witnesses on behalf of the Manchester Chamber of Commerce, 2715-2717—Grounds for the opinion that the construction of Indian Railways should be entirely undertaken by the State, expediency, if possible, of constructing by contract, 2716-2721. 2770-2775.

Contention that the railway accounts should be kept entirely separate from the other financial arrangements of the State, 2721. 2723 2749—Approval of there being a distinct department of the Indian Government to attend to the construction and management of railways, 2722.

Strong opinion that the surplus revenues of railways should be devoted to meet the interest on fresh loans, anticipation that there will be a steady average increase of traffic, 2723. 2750-2767. 2776-2780—Grounds for considering that the financial position of India fully justifies a departure from the limit of two millions and a half for railway construction; belief that eight millions may be annually spent in this way, 2728-2732. 2736.

Disapproval

Report, 1884—continued.

Graham, Donald. (Analysis of his Evidence)—continued.

Disapproval of the policy that the State should meet all the loss out of the lines that are considered productive; expediency of the Government owning the paying, as well as the non-paying lines, 2733, 2734—Strong deprecation of a break of gauge on the Indian railways; contention that all lines, except small separate systems, should be on the broad gauge, 2737-2740—Belief that the Rajputana-Malwa lines will eventually have to be taken up and relaid on the broad gauge, 2738

Great importance of completing the construction of the Sukkur Bridge over the Indus, which has been stopped for want of funds, opinion that this is a work which would pay itself in a very short time, 2740. 2781-2787—Expediency of the Government having complete control over the rates and goods traffic on the guaranteed lines, 2741-2744.

Suggestion that a system of despatch companies should be established in India for the promotion of traffic similar to those in America, 2744, 2745—Belief that a very small fraction of the capital required for railway construction could be raised in India, 2746, 2748.

Grounds for believing that too much has been made of the loss by exchange difficulty, 2747, 2748—Considerable complaints made by native merchants in regard to the exactions by native chiefs in the shape of customs or octroi duties, 2788-2791.

GRAIN.

Inconvenience and disadvantage in there being only one line (the East Indian) for the conveyance of the immense traffic in grain, &c., to Calcutta, *Sir J. Caird* 399-401—Better position of India for raising famines the more she is induced to grow rice, wheat, &c., by an increased foreign demand, *ib* 413—Very small export of wheat and rice as compared with the surplus grain produce of the whole country, *ib*. 471-477-494-496.

Explanation that two-thirds of the natives live upon grain other than wheat, *Sir J. Caird* 528—Consumption by cultivators of the cheaper grains, and not of wheat, *ib*. 561, 562

Important influence of railways on cultivation in the districts through which they pass; absence of desire on the part of the natives to raise more grain than they require for themselves, when they have no means to send it to a market, *Glaser* 1890 1905, 1906. 1944-1954. 1962-1965. 2134. 2158 2163-2166. 2247-2251. 2671-2675—Statement that the district between Jhansi and Cawnpur may be called one field of grain, extending a few miles only from the truck road; plenty of land available for cultivation beyond this limit, *ib*. 2048-2051. 2056, 2057. 2163-2166.

Opinion that the greater part of the grain carried in the Great Indian Peninsula is wheat, statement that Bombay habitually imports rice, inasmuch as there is not enough for ten days' consumption in the whole of the Presidency, *Crawford* 3761-3767

Grounds for the conclusion that grain should be carried in bulk, but not in bags, as a means of reducing the rate of freight on the railways, explanation that grain can be moved, in the case of break of gauge, more easily in bulk than in bags, *Ashburner* 6396-6399. 6423, 6424 6430-6436—Importance of railways, especially during the monsoon, for carrying grain and cotton, which, if transported otherwise, leads to large losses, exactions by native chiefs, which would be avoided by means of railways, *ib*. 6448, 6449. 6460-6469—The Bombay Presidency produces much more grain than is required for its own consumption, *ib* 6330

Examination regarding the grain-producing districts of India, and their power of supplying sufficient food in the event of famine, statement that the Chhattisgarh district is the nucleus of the food-producing country, *Hunter* 7140 7142, 7143. 7190-7202. 7252-7282. 7303-7305 7312-7315 7389-7415—Annual production in the Chhattisgarh country of 241,000 tons of grain more than its population consumes, *ib* 7140

Assertion that, if railways are so extended as to induce an export of grain to England, there will be no fear that the people will be deprived thereby of their food, contention that the advantages connected with export more than compensate for certain local disadvantages, *Hunter* 7168-7180 7205-7213 7348-7350—Strong belief that railways increase the amount of grain ordinarily raised, *ib* 7170 7188

Conclusion arrived at by the Famine Commissioners that if prices of food rise threefold, the famine standard would be reached, argument that, although exportation of wheat might go on after prices had reached a point that would cause suffering, still such prices would very quickly bring export to a standstill, *Hunter* 7207-7210 7391—Admission that throughout the Bengal famine in 1866 considerable quantities of grain were being exported from Calcutta, *ib* 7348-7350

Suggestions in report of Famine Commission of 1880 as to the precedence to be given to the carriage of food grain in time of famine, *App.* 592.

GRAIN—continued.

Statement showing present and past rates per maund for grain earned to Bombay by the Great Indian Peninsula Railway, and the percentage of increase and decrease on the rates in January 1884, as compared with January 1881; *App.* 593.

Tabular statement showing the exports of wheat from India to different countries in each year from 1871-72 to 1882-83, inclusive, *App.* 766.

Statement showing the annual exports, in quantity and value, of Indian wheat from each province, from 1866-67 to 1882-83; *App.* 782.

See <i>Chattisgarh</i>	<i>Cultivation of the Soil</i>	<i>Exports</i>	<i>Jhansi-Cawnpur</i>
<i>Railway.</i>	<i>Wheat.</i>		

GREAT INDIAN PENINSULA RAILWAY :

Very large falling off in the receipts of the Great Indian Peninsula line in the first few months of 1884; doubt whether there has been any reduction in the cost of maintenance, *Strachey* 1065-1067.

Approval, upon general grounds, of extending the Great Indian Peninsula system to Cawnpur, but not on the terms already proposed by that company, *Coke* 1463-1455.

Grounds for believing that certain work on the Great Indian Peninsula line failed, not through scamping by the contractors, but from the fault of the specifications, unsuitable materials used by the engineers in the construction of the bridges of this line, *Glover* 2030, 2066-2070. 2138-2142. 2261-2263

Numerous engineering mistakes which were made in India in past days, renewal of portions of the Great Indian Peninsula Railway upon several occasions at a cost of 70,000 L a mile, on account of the bridges being washed away, *Bythell* 2608—Statement that, although Indian cotton is one-half the price it was in 1869, the railway company are charging more for carriage than they did in that year, *ib.* 2617-2620.

Considerable difference of opinion between the merchants of Bombay and the railway company in regard to rates; indignation meetings called in Bombay on this subject, *Bythell* 2639, 2640—Belief that the result of the high charges on the railway will be that the cotton cultivation will be driven from India to America, *ib.* 2641, 2642—Injury to cultivators on the line, inasmuch as a large proportion of the price obtained in Europe for their produce goes for railway rates, *ib.* 2681.

Explanation that the lower rates on other lines than on the Great Indian Peninsula are probably owing to the sea and river competition, with which they have to contend, impossibility of introducing a line to compete with the Great Indian Peninsula, *Bythell* 2669-2674.

Statement that the advancement of the rates by the Great Indian Peninsula Company is equivalent to a cessation of traffic to the extent of ten miles on each side of the line, *Birkmyre* 3408-3410.

Impossibility for the Great Indian Peninsula Company to compete on equal terms with the East Indian Railway in the event of a line being constructed from Calcutta to Bombay; detailed comparison of the rates charged by the two lines, *Crawford* 3664-3672. 3674. 3745-3753 3782-3791. 3877-3882. 3950-3953.

Revenue accounts for each half-year from 31st December 1881 to 31st December 1883; *App.* 760, 761.

Statement showing for each year the mileage, average age, cost, and general results of working, *App.* 773 774.

Statistics of the cost of working under different heads, *App.* 798 *et seq.*

See also *Bhopal to Jhansi, Gwahor, and Cawnpur, 2. Nagpur and Bengal Railway*

GUARANTEES, AND GUARANTEED RAILWAYS.

- 1 *Terms of the Guarantees to Existing Lines*
- 2 *Efficient Administration of the Guaranteed Railways.*
- 3 *Financial Statistics.*
- 4 *Generally as to the Question of further Guarantees, and the Limitations and Conditions under which they should be given.*
- 5 *Conclusions and Recommendations of the Committee.*

1. Terms of the Guarantees to Existing Lines

Decided objection to the system of absolute guarantee on the capital outlay, not only as productive of a very great waste of money, but as creating for third parties a very valuable property at the expense of the taxpayers of India, *Strachey* 19. 22. 279-283

Report, 1884—continued.

GUARANTEES, AND GUARANTEED RAILWAYS—continued.**1. Terms of the Guarantees to Existing Lines—continued.**

1096-1100—Enhanced financial difficulties if the system of guarantee had been continued, important effect as regards the exchange, *Strachey* 1213-1219.

Information generally as to the respective positions of the guaranteed railways and the State railways, grounds for the conclusion that the mode of guaranteeing is an expensive system of promoting construction, *Trevor* 1561, 1562 1569-1572. 1596-1604, 1606 1652-1654, 1657. 1665-1668. 1692-1695, 1696-1725. 1732-1738. 1747. 1810.

Identical terms made originally by the Government with the East Indian and Great Indian Peninsula Companies, subsequent contracts made with other companies followed the lines of the earlier ones, *Crawford* 4002.

Disadvantage in the rate of guarantee having been fixed as high as five per cent., *Conway-Gordon* 4295.

Statement that formerly the money obtained upon guarantee was raised upon less favourable terms than that borrowed directly by the Government, opinion that this was due to the magnitude of the transactions, *Westland* 5297, 5298.

2. Efficient Administration of the Guaranteed Railways.

Very efficient working of the guaranteed railways in times of famine, &c, though the companies have not been liberal in their terms or charges on such occasions, *Strachey* 249-252—Satisfaction expressed with the companies' management generally in India, there being moreover an efficient Government audit of all expenditure, *ib.* 314-316.

3. Financial Statistics :

Increase during the last eight years to the extent of 5,700,000 *l.* a-year in the payments of the India Office in respect of the guaranteed railways, *Strachey* 197, 198

Statement containing estimates of cost and of net revenue in the case of each railway with which the State has current accounts, *App.* 534.

Capital expenditure on each of the guaranteed railways for each of the twenty-five years ending 1883-84, *App.* 556. 698

Statement showing the direct annual gain or loss to the State from railway outlay in each year since 1858-59, *App.* 558.

Statistics showing in aggregate sums the total cost, gross receipts, working expenses, net revenue, &c., *App.* 622.

Statement of the net earnings and the repayment of surplus profits in each year since 1879-80, *App.* 634.

Telegraphic communication from the Governor General, dated 22nd June 1884, submitting grounds for dissenting from certain conclusions embodied in Financial Despatch from the Secretary of State of 27th May 1884; *App.* 700, 701.

Despatch from the Secretary of State to the Government of India, dated 27th May 1884, containing explanations on the question of profit from the guaranteed railways in connection with the loss on the exchange, &c., *App.* 702, 703.

Memorandum attached to Despatch of 27th May 1884, together with tabular statistics in support of the conclusions arrived at by the Secretary of State in Council, *App.* 704-709.

Tabular statements of annual expenditure and of revenue of the guaranteed lines *App.* 715 *et seq.*

Statement of interest and excess profits in respect of each of the guaranteed railways in each year since 1867-68, *App.* 718.

Statement of gross receipts from each railway since 1873-74, *App.* 732, 733

Statement showing the direct annual gain or loss to the State from railway outlay since 1858, *App.* 750.

Revenue accounts of the several guaranteed railways for each half-year from 31st December 1881 to 31st December 1883, *App.* 760, 761

Table showing the maximum fares and rates sanctioned for each of the guaranteed railways, *App.* 795.

Financial results of the transactions connected with the working of the guaranteed lines, *App.* 852.

GUARANTEES, AND GUARANTEED RAILWAYS—continued.

4 Generally as to the Question of further Guarantees, and the Limitations and Conditions under which they should be given.

Reiteration of objections to the system of guarantees, as involving an undue charge upon the taxpayers of India, *Strachey* 19 22, 279-283—Decided disapproval of a limited guarantee, as well as of unlimited guarantees, *ib* 233—Necessity of a further guarantee in the case of any company exhausting the amount of capital first guaranteed, *ib* 286.

Further protest against any return to the old system of guarantee, as involving extravagance in construction as well as extravagant terms of purchase by Government, whilst the companies are under no risk whatever, *Strachey* 1096-1100.

Probability of construction by companies not requiring much Government control if the guarantee were limited to a fixed amount of capital, *Sir J. Caird* 686-691.

Conclusion as to the necessity, in the case of railway extension, of State guarantees; opinion that the guarantee should take the form of a subsidy, every shilling of which should be repaid to the Government when the corner was turned, and the line was profitable, *Chapman* 914-917, 922, 987-992, 1014-1016—As regards commercial lines, the Indian Government should not undertake any guarantees unless they are convinced that within a certain number of years the lines will pay at least 4 per cent., *ib* 952-985—Statement that the change which has taken place in the Government policy regarding guarantees and railway extension has led to considerable loss of money by influential men in the City of London, *ib* 979, 980.

Great advantage in the Government giving a permanent guarantee, so that they might thereby retain the necessary control over the companies, *Coke* 1301-1303, 1334-1337—Reason for a Government guarantee of four per cent. to railways which would be sure to pay, inasmuch as it would protect the public from the payment of very high rates, *ib* 1379-1389.

Advocacy of a system of construction by private companies, with a permanent Government guarantee; importance in each case that the Government should select the scheme, *Bullen-Smith* 2306-2310, 2325, 2386, 2386.

Grounds for the opinion that private unaided enterprise is not likely in India to do anything in the way of extending the railway system; expediency for the Government to give a permanent guarantee to private companies who undertake the works, *Hardie* 2823-2826, 2831-2833, 2927-2932, 2939-2942—Explanation that a limited Government guarantee to the railways would involve higher rates, for the purpose of providing profits for the shareholders, *ib* 2873-2882.

Suggestions generally as to the steps which ought to be taken for the purpose of obtaining capital for the schemes, opinion that to make sure of floating new companies there should be a Government guarantee of 4 per cent., *Dickens* 3065-3077, 3092, 3183-3186, 3225-3228, 3238-3249, 3258-3270.

Conclusion that the existing contracts with guaranteed companies, by which they are enabled to debit rupees at a fixed rate of exchange, has been a disadvantage to the Indian Government; expediency of the Government securing itself in the future by making the guarantee dependent on the exchange, *Dickens* 3078-3085.

Further evidence and suggestions respecting the construction of railways by means of companies under a guarantee; expediency of the Government giving a perpetual guarantee of 4 per cent., *Dickens* 3238-3251, 3258-3270, 3290-3304.

Approval of a guarantee of 3½ per cent. being given to the companies, and in addition the profits in excess of the guarantee; belief that with this arrangement the capital required would be obtained without any difficulty, *Birkmyre* 3400-3407, 3434-3442.

Information respecting the railways proposed to be constructed by private companies with a limited guarantee, suggestions as to the proposals to be made by the Government to the guaranteed companies, *Conway-Gordon* 4128-4132, 4309, 4310—Points on which the Government should be specially careful to guard itself in the case of future contracts with guaranteed companies; mistake in the past as regards the rate of guarantee, the terms of purchase, and the rate of exchange, *ib* 4295, 4303-4305.

Few advantages in the system of limited guarantee; decided advantage in the case of contingent guarantee, by which the Government would secure half profits over a certain rate of earnings, *Conway-Gordon* 4309, 4310—Statement that experience proves that a high rate of guarantee does not tend to lower the rates and fares, but rather the contrary, *ib* 4525-4532.

Further opinion as to the advantages of a continuous guarantee at a low rate, as opposed to a limited guarantee; belief that money will not be obtained unless the guarantee be continuous, *Conway-Gordon* 4547-4563—Argument that in regard to guaranteed lines the only practical plan upon which to proceed is that one district of country should pay for another, *ib* 4559-4563.

GUARANTEES, AND GUARANTEED RAILWAYS—continued.

4 Generally as to the Question of further Guarantees, &c.—continued.

Statement explanatory of the view of the Government of India, conclusion that at present it would be unwise to revert to the system of limited guarantee in regard to new lines which are not indispensable for protection against famine, *Westland 4764*—Expediency of leaving the Indian Government and the Secretary of State free to deal with each particular case of guarantee to a protective line, *ib. 4765-4768. 4972*.

Conclusion that the guarantee given by the Government in the case of the proposed new lines should be limited to that rate which will be sufficient to raise the money required, *Kendal 5830-5838. 5872*.

Explanation that the system of limited guarantee provides for advances of interest during construction for a period not exceeding five years, such advances to be repaid with simple interest from surplus profits above 5 or 6 per cent., *Waterfield 6512*.

Consideration of the methods most suitable for bringing forward new railways in India; expediency of the Government making the terms acceptable with the public by giving either a complete or partial guarantee, *Robertson 6558 6560-6563 6591-6597 6609-6646*—Expediency of giving companies which are formed with a Government guarantee the entire control over the management of their own lines, *ib. 6639-6641*.

Approval of the Government giving a limited guarantee on the best terms that can be obtained, expediency, nevertheless, of a permanent guarantee, if it be necessary, to enable railways to be carried out extensively, *Danvers 6872. 6898-6905. 7018-7015*—Desirability of allowing existing companies to construct some of the proposed new lines, especially those in connection with their own railways, *ib. 6933-6986*.

Opinion that a guaranteed interest of 3½ per cent. ought to be sufficient to induce capitalists to make the railways, provided that they were allowed to increase the interest by surplus profits, *Danvers 7010-7015*—Contention that the Government should not pay interest upon any excess of guaranteed capital which it might be necessary to raise by the companies, expediency of the guarantee being strictly limited and the risk thrown on the company, *ib. 7099-7103*.

Expediency of leaving the limit of guaranteed construction undefined by the present Committee, if other matters are also left undefined, *Hunter 7338, 7339*.

Several lines proposed to be made by means of capital to be raised by private companies under the limited guarantee system, *App. 527. 570. 576*.

5 Conclusions and Recommendations of the Committee

Summary of the proposals of the Government of India as to the capital to be raised by companies working on their own account, with a guarantee of advances of interest for a limited term of years, repayable from surplus profits, *Rep. vi*.

Proposal by the Indian Government to appropriate an average annual sum of 200,000*l.* from the famine grant towards defraying the charge for interest on the capital to be raised by limited guarantee companies, *Rep. vi*—Exception taken to the foregoing proposal, as implying a complete inversion of the regulations hitherto in force, as the famine grant would in part be used as interest on borrowed capital, *ib.*

More favourable financial conditions at the present time than in former years, so that so high a guarantee as 5 per cent. need not now be given, *Rep. viii*.

Reference to the extension scheme of the Government of India as largely dependent on certain lines, to which they attach the greatest importance, being taken up by companies, considerable doubt on this point, *Rep. ix*.

Summary by the Committee of the terms in the cases, respectively, of the Bengal Central Company and the Southern Mahratta Company, *Rep. x*.

Suggestion by the Committee that the guarantee in sterling should be absolute, *Rep. xi*.

See also Administration and Management. Arrears of Interest Bengal Central Railway Bombay, Baroda, and Central Indian Railway. Calcutta and South Eastern Railway. Capital. Cost of Lines. Directors Eastern Bengal Railway. East Indian Railway Exchange, Loss by. Extension of Railways. Famines and Famine Lines Financial Results of Railways. Gauge. Great Indian Peninsula Railway Loans. Madras Railway. Private Enterprise Productive Lines. Protective Lines. Purchase of Undertakings. Rates and Fares Southern Mahratta Company State Railways.

Gwalior. See Bhopal to Jhansi, Gwalior, and Cawnpur.

H.

Halday, Frederick James. See *Dalyell, R A.*

Hardie, Robert (Analysis of his Evidence)—Witness, who is Secretary to the Bank of Bengal, is intimately acquainted with the financial part of the subject of Indian Railways, 2792-2795.

Information generally respecting the Government loans in India; these have been largely absorbed in England of late years, 2795-2809 2837-2839 2887-2893 2910-2926. 2969-2972 2982-2987 2997-3012. 3015-3043—Apprehensions as to the suspension of the Bland Bill, which have operated to prevent people in England from taking up loans in silver, probable effect of the suspension of this Bill to cause a fall in the value of silver, 2798-2800. 2911-2914 2921 2997-2999.

Belief that there are causes at work at the present time which will make it difficult in the future for the Government of India to get loans in the country itself, 2799—Statement that the last loan fell almost entirely on the Indian money market, great rise in consequence in the rates of interest, 2800—Impossibility of laying down any fixed rule as to the amount of the Government loan to be offered annually to the Indian market, 2801-2805.

Decision of the Government not to give further loans to local bodies, the result of this decision will be that in future these bodies will compete with the Government in regard to loans, 2806-2808. 2887-2889—Greater difficulty in the future for the Government to obtain loans on account of the local bodies being forced into the market to compete, expediency, for this reason, that the Government should be left free to borrow anywhere in the open market, 2807-2809

Belief that in India European opinion is very much in favour of largely increased expenditure for the extension of railways, recommendation by the Bombay Chamber of Commerce in favour of an expenditure of twenty millions sterling annually, 2810-2819. 2840-2842—Exceedingly small interest taken by the natives in the question of the extension of railways, fear upon their part that such an extension would lead to an increased taxation, 2812-2815 2834-2836 2934-2938 2943-2951. 2973-2975—Disapproval of such an extension as is proposed by the Bombay Chamber of Commerce, grounds for the opinion that it would be difficult to spend judiciously upon railways as much even as ten millions sterling annually, 2817-2819. 2846-2851. 2884-2886.

Assertion that India itself has benefited very much by the fall in the value of silver, and that the Anglo-Indians upon salaries, and with savings, in India, are the only individuals who have suffered, 2820-2822. 2852-2858. 2970-2973—Grounds for the opinion that private individual enterprise is not likely in India to do anything in the way of extending the railway system; expediency for the Government to give a permanent guarantee to private companies who undertake the works, 2823-2826. 2931-2833. 2927-2932. 2939-2942.

Strong opinion that the Government should exercise a very considerable amount of control in the management of the railways, 2826, 2827—Great importance that the rates of the companies should be as low as possible; approval of the Government interfering for the reduction of rates in cases where guarantees are given, 2828-2830 2843-2846—Small amount invested by natives in Government loans, where only 4 per cent. can be obtained; interest received by natives in Calcutta for loans at from 10 to 15 per cent., 2837-2839. 2915. 2976-2981. 2988-2996

Decided approval of extending the railway system in India so long as it is not done so fast as to cause great fluctuations in the exchange, 2859-2871—Explanation that a limited Government guarantee to the railways would involve higher rates for the purpose of providing profits for the shareholders, 2873-2882—Decided improvement of late years in the general condition of the natives of India, assertion that this improvement is due, to a great extent, to the railway system, 2890-2908.

Strong opinion that facilities of export stimulate the industry of the people; belief that if these facilities did not exist, there would probably be no supplies of food over the local requirements in the event of famine, 2905-2909—Grounds for the conclusion that if loans are to be raised in gold, they should be raised in England, and not in India; impossibility for the Government to borrow in India in silver at the present time except upon prohibitive terms, 2913-2926.

Suggestion that in India railways should be managed by a board appointed by the Government in the same way that port trusts are managed, 2929-2931—Statement that in Bombay some cotton mills have been erected, and are carried on extensively by natives, 2937.

Decided opinion that, at the present time, there is ample scope for the construction of remunerative lines, 2940—Contention that in the selection of future lines of railway the first consideration of the Government should be the prevention of famine, 2941.

Statement

Report, 1884—continued

Hardie, Robert. (Analysis of his Evidence)—continued.

Statement that the native traders very seldom have accounts at the native banks, 2957—Chief business of the natives with the English banks is borrowing money and selling bills, infrequent instances of natives lending money to the banks, 2957, 2958, 3013, 3014.

Great importance that the Government of India should borrow from the natives to the utmost extent to which they are willing to lend, 2961—Political advantage that the natives of India should have a direct pecuniary interest in the finances of the State, 2961, 3020-3022.

Large amount of Government 4 per cent. rupee paper held by natives, description of the class of natives who invest their savings in this way, 2978-2981—Very limited extent to which money at 4 per cent. can be borrowed in India on account of the advantageous terms on which advances can be made on mortgage, 2988-2996.

Strong opinion that, looking at the financial interests of India alone, it is advisable that all loans should be raised in England and not in India, 3005-3034—Advantage in borrowing in India to the extent to which loans can really be absorbed in that country, small amount thus available annually, 3010-3014, 3019-3027, 3043.

Expediency of the Government issuing their loans in sterling instead of silver, such a course would have the effect of reassuring the public, and would also be followed by a considerable rise in the price of rupee loans, 3039-3042.

Hathras Railway (North West Provinces) Satisfactory arrangement by which the Hathras line, only thirty-six miles long, in the North West Provinces, has been made by the locality, and the Government jointly, *Strachey* 183

Favourable opinion as regards the arrangement whereby the capital for this line has been provided equally by Government and by shareholders, the latter receiving 4 per cent. interest, and the management resting with Government, *Strachey* 1142-1152—Doubt as to any serious difficulty having arisen in the foregoing case either as regards management or rates, *ib* 1149-1152.

Hudupur District. Statement showing the area, population, and loss of population, during the famine in this district, *App.* 587.

Hoarding See *Condition of the People*

Holkar and Sindia-Neemuch Railway Statement showing for each year the mileage, average age, cost, and general results of working, *App.* 778—Statistics of the cost of working under different heads, *ib.* 798 *et seq.*

Hope, Honourable T. C. Proposal by Mr. Hope (Public Works Minister), with which the Government of India do not as a whole agree, that quinquennial contracts should be entered into by the Public Works Department in regard to railway extension, grounds for this proposal, *Hunter* 7165, 7364-7377

Map of India, showing the railways proposed by Mr. Hope, *App.* 522

Minute by Mr. Hope, dated 20th January 1883, in which it is proposed to place the Imperial Public Works Administration, in respect to the whole of its transactions, upon a contract basis analogous to that of the quinquennial agreements with Provincial Governments, *App.* 536-540

Hunter, The Hon. W. W., C.S.I., C.I.E. (Analysis of his Evidence)—Has been for thirteen years Director General of Statistics to the Government of India, is now a Member of the Viceroy's Legislative Council, 7135, 7136.

Perfect agreement of witness with the evidence of Mr. Westland and of Major Conway-Gordon as regards the financial character of the proposals of the Government of India respecting the construction of railways, 7137.

Information generally as to the railway policy of the Indian Government with reference to food distribution and famine relief, desire of the Government for continuous broad gauge communication from the centres of food production to the centres of population and to the famine tracts, 7138, 7139, 7219-7227, 7316, 7336—Explanation as to the means by which the Government propose to carry out their famine policy by an extension of the railway system, several new lines which it is proposed to construct to carry food from the granary districts, 7138, 7139, 7142-7152, 7231, 7250-7282.

Examination regarding the grain-producing districts of India and their power of supplying sufficient food in the event of famine; statement that the Chatusgarh district is the nucleus of the food-producing country, 7140, 7142, 7143, 7190-7202, 7252-7282, 7303-7305, 7312-7315, 7389-7415—Explanation that the fertility of the Chatusgarh country is partly due to its rich soil, but chiefly to the fact that it has the most uniform and trustworthy rainfall in India, 7140, 7166, 7167, 7309-7311.

Annual production in the Chatusgarh country of 241,000 tons of grain more than the population consumes, 7140, 7148, 7149, 7393, 7394—Generally low price of the

Hunter, The Hon. W. W., C.S.I., C.I.E. (Analysis of his Evidence)—continued.

wheat which is raised in the Chhatta-garh district, 7140. 7142, 7143*. 7190-7202. 7210. 7303-7305 7389-7393.

Description generally of the character of the Bundelkund country, as an example of the meaning of a famine tract, gradual decrease of the population in this country since 1853; 7141. 7400-7406—Great importance of a railway for the relief of Bundelkund in the event of famine; statistics showing the enormous amount of food which can be carried to this district by a railway as compared with that brought by carts, 7143. 7232-7234.

Large commercial advantages which would result from the construction of the line from Calcutta to Nagpur, passing through the Chhatta-garh country; estimate that the land revenue would be largely increased by this line, 7144, 7145. 7147-7149, 7150—Increased export of valuable timber from the Central Provinces anticipated by means of Nagpur-Bengal line, 7149*. 7150.

Great importance of the proposed Bilaspur-Etawa Railway in relieving famine in Bundelkund and the northern famine tract*, 7151—Advantage of the Bilaspur line in opening the Umeria or Rewah coalfield; particulars as to the quality and extent of this coal, 7151. 7235-7240—Excellent iron ore in the Katni and Jubbulpur districts, which has not been utilised on account of the want of fuel, 7151. 7239, 7240. 7285, 7286.

Desire on the part of the Indian Government that the present Committee will recommend the construction of the Jhansi and Manickpur line upon the broad gauge, if this line be made on the narrow gauge, it would, in the event of famine, lead to delay and loss of life, 7152, 7409-7415.

Contention that the financial arrangements of the Government for the construction of the proposed famine lines are thoroughly sound, 7153, 7154. 7156, 7157. 7416-7421—Information respecting the probability of private companies coming forward to undertake the construction of the proposed lines, assertion that even if companies are not found, the Government will not allow the question of railway extension to collapse, 7155. 7317-7323 7378-7388.

Examination with regard to the principle to be adopted in reference to the borrowing arrangements of the Government; opinion that the present Committee should fix a limit of three-and-a-half millions as the annual amount to be borrowed for railway construction, 7158. 7171-7184. 7228-7230. 7335-7347. 7427-7434.

Contention that although railways do not necessarily increase the population of the districts through which they pass, they tend to do so; instances of the effect of the introduction of railways upon the population of certain districts, 7159, 7160. 7305-7308. 7422-7424—Statement that of the total population there are from twelve to fifteen millions of the people who have either themselves migrated, or are the children of immigrants, 7160.

Information respecting the large quantity of land in India, which, though cultivable, is not at present cultivated; great influence of railways in regard to increasing cultivation, 7161-7164. 7170. 7241-7244—Effect also of railways to equalise prices in regard to localities, and to render the variations less from year to year, 7164. 7170.

Expediency of private companies being allowed to charge interest to capital during the construction of the line; belief that in the case of the Patna-Baraatch Railway the Secretary of State has accepted this principle, 7165. 7351-7364—Proposal by Mr. Hope, Public Works Minister, with which the Government of India do not as a whole agree, that quinquennial contracts should be entered into by the Public Works Department in regard to railway extension; grounds for this proposal, 7165. 7364-7377.

Assertion that if railways are so extended as to induce an export of grain to England, there will be no fear that the people will be deprived thereby of their food, contention that the advantages connected with export more than compensate for certain local disadvantages, 7168-7170. 7205-7213. 7348-7350—Strong belief that railways increase the amount of grain ordinarily raised, 7170. 7188.

Disapproval, on the ground of economy, of any sudden expansion of expenditure upon railways; expediency of the Government being limited to a definite scheme of construction, 7174-7178—Argument that the importance of railways is so great, that any loss by exchange which may arise in connection with their construction, will be more than counterbalanced by the increase in prosperity produced by their extension, 7180-7184.

Almost complete isolation of Orissa during the late famine; protection given to this district by the construction of a tidal canal from the west bank of the Hoogley River, *in* the Midnapur district, 7189. 7231.

Result of certain experiments made by the Government that wheat can be raised by hired labour in India at about 12 s., and sold with a good profit to the cultivator at 16 s. or 18 s. a quarter, 7197.

Striking feature in the history of railway enterprise in India, that the actual traffic on the

Report, 1884—continued.

Hunter, The Hon. W. W., C. S. I., C. J. E. (Analysis of his Evidence)—continued.

the great lines has invariably surpassed the official estimates, admission that in the Madras Presidency there are some railways which have not paid, 7203, 7204, 7325-7328.

Conclusion arrived at by the Famine Commissioners, that if prices of food rise three-fold, the famine standard would be reached, argument that although exportation of wheat might go on after prices had reached a point that would cause suffering, still such prices would very quickly bring exportations to a standstill, 7207-7210, 7391—Conclusion that the largely increasing exports of India form one indication of the increasing prosperity of the people; other reasons for considering that the prosperity of India has materially increased, 7214-7216.

Very small increased taxation in regard to the land revenue, as compared with the extra profits derived from the land, 7217, 7218—Disapproval of the suggestion made by General Strachey that each case of extension should be fought out on its own merits, 7225, 7226—Contention that the difference of opinion between the Government and the Secretary of State in regard to the Jhansi-Manickpur line, has had the effect of delaying progress, 7226.

Belief that the cultivation of wheat will be principally confined to the ryots, and not undertaken to a large extent by capitalists, as in the case of indigo, 7243, 7244—Conclusion that although famines amongst large populations make the most stir in the world, they create most acute suffering amongst sparse populations, 7245-7249.

Statement that if the surplus produce of British Burmah can be made available for the famine tracts of India, then the problem of famine relief would be nearly solved, 7258

—Explanation that the surplus produce of the Chattisgarh district would feed about a million and a half of people annually, and that during a famine it is a very small part of the population which so requires feeding, 7259-7261.

Impossibility for the existing railway to carry away the surplus produce of the Chattisgarh district, for the reason that the cost of cartage is so great that it will hardly pay, 7266-7270—Statement that the prospects of the Hyderabad line appeared so good that the company launched it in London without any reference to the Chattisgarh food supply, 7276.

Grounds for the opinion that the wheat of Chattisgarh would find its way partly to Calcutta and partly to Bombay, 7278-7282—Fair probability that the portion of the line between Bilaspur and Sitarampur, as distinguished from the other portions, will pay when it is constructed, 7284.

Information respecting the districts which will be protected by the construction of the Jhansi-Manickpur line, if sanctioned, complete communication with the food-producing countries by this line, conditional on the whole of the Government proposals for the district being carried out, 7288-7302.

Possibility of suggesting lines with better prospects of paying, but which would not protect the districts which require protection; view of the Government in their proposals that protection is to be first considered, 7329-7334—Expediency of leaving the limit of guaranteed construction undefined by the present Committee if other matters are also left undefined, 7338, 7339—Admission that throughout the Bengal famine in 1866 considerable quantities of grain were being exported from Calcutta, 7348-7350.

Explanation that the absence of annual profits from railways to expend on further extensions does not interfere with the proposal that quinquennial contracts should be entered into, as the Government would find the money from other sources, 7370-7373—Desire on the part of Mr. Hope that the same amount of stability should be given to the department of public works as is now given to the local governments, 7376.

Belief that, if companies do not come forward, the Government, regarding the proposed lines as of such importance, would themselves raise the capital, and construct them, 7378-7381—Desire of the Government that the Bilaspur and Nagpur line should be made under a limited guarantee, proposal by Mr. Miller, on the other hand, to make it on the South Mahratta terms, 7388

Statement that at the present time, in the absence of railways, the surplus of 240,000 tons of wheat struggles outward from the Chattisgarh district, by cart traffic, partly to the Nagpur Railway, and partly to Jabalpur, 7393-7399—Explanation that millet and not wheat is the staple food of the poor population of Bundelkand, 7404.

Disagreement with Mr. Miller's evidence that a railway from Bhopal to Gwalior would pay, if only from the local products passing over it, 7408—Evils of break of gauge considered so grave that in making a military line to the frontier continuous broad gauge is rightly insisted upon; argument that to meet such an enemy as famine, which strikes every few years, continuous broad gauge is also necessary, 7411-7415—Impossibility of estimating at present the amount of traffic which may be expected on the line from Bilaspur to Calcutta, 7425, 7426.

Hyderabad. Great importance of completing the link between Palanpore and Hyderabad, which would perfect the whole system of railways in that direction, *Ashburner* 6336. 6473-6477

Statement that the prospects of the Hyderabad line appeared so good that the company launched it in London without any reference to the Chhattisgarh food supply, *Hunter* 7276.

Improvidence of Natives. Belief that the circumstances and habits of life of the natives of India are not such as would induce them to provide against famine whether the Government assisted them or not, *Westland* 5272-5274.

Indian Council. Expediency of there being on the Indian Council members possessing practical experience with the working of railways, *Birkmyre* 3370.

See also the *Headings generally throughout the Index.*

Indus Valley and Kandahar Railway. Large increase in the revenue of the Indus Valley State Railway, which has resulted from lowering the rates upon that line, *Conway-Gordon* 4323, 4324—Example of success in the case of the Indus Valley line, in regard to which there had been official denials of the possibility of remunerative traffic, *ib* 5540.

Revenue accounts for each of the years 1881-82, 1882-83, and 1883-84, *App.* 751-753—Administrative transactions for the above years, *ib* 754-759.

Revenue accounts for each half-year from 31st December 1881 to 31st December 1883, *App.* 762-765

Statement showing for each year the mileage, average age, cost, and general results of working, *App.* 786.

Statistics of the cost of working under different heads, *App.* 798 *et seq*

Interest on Capital during Construction. Expediency of private companies being allowed to charge interest to capital during the construction of the line; belief that in the case of the Patna-Batavia Railway the Secretary of State has accepted this principle, *Hunter* 7165, 7351-7364 — See also *Bengal Central Railway.*

Interest on Loans. Argument that the interest at 4 per cent. which has to be earned on the whole of the productive public works expenditure forms in itself a sinking fund of a very material extent, *Conway-Gordon* 3531.

Decision of the Government of India in 1858, on the recommendation of the merchants and bankers of Calcutta, that interest on rupee paper would be made payable at the Bank of England by drafts on Calcutta, *Robertson* 6650.

Despatches from the Secretary of State, and letters in reply from the Government of India, in the period from 6th January 1881 to 29th January 1884, respecting railway extension, the progress to be made, the cost to be incurred, and the means of meeting the interest on outlay, *App.* 488 *et seq*

Return showing the payments of interest on Indian debt in each year from 1870-71 to 1883-84, *App.* 623.

Memorandum submitted by Mr Wood in connection with Tables showing the advantages of taking up Indian loans in England instead of in India, *App.* 691, 692.

Statement of the net disbursements of the Home Treasury of the Government of India in respect of interest on debt in each year since 1867-68, *App.* 696, 697.

Detailed statement showing the interest on debt incurred for productive public works in each year since 1867-68, *App.* 720, 721.

See also *Loans.*

Interest (Native Capital). High rate of interest charged by the ryot when lending money to his neighbours, 37½ per cent frequently the rate per cent between ryots and local traders, who supply them with seed, and help them with their revenue payments, *Westland* 4837, 4838—See also *Loans.*

Iron. Great value of railways for the development of iron and coal, *Sir J. Card* 567, 568—Excellent iron ore in the Katni and Jabalpur district, which has not been utilised on account of the want of fuel, *Hunter* 7151, 7239, 7244, 7285, 7286.

Importance of making purchases of iron for railway construction at the present time because of its very low price, diminution also in the price of all other railway materials as well as iron, *Coke* 1410-1412, 1501-1503.

Statement showing the imports of iron into India from different foreign countries in each year since 1871-72, *App.* 769.

Statement

Report, 1884—continued.

Iron—continued

Statement of quantities and value of iron imported from foreign ports into the several provinces of India in each year from 1866-67 to 1882-83, *App.* 784.

Probable effect of railway extension in leading to the profitable working of iron mines in India, *Rep.* vii.

Irrigation As regards protection against famine, irrigation works are quite secondary to railways, *Sur J. Card* 607—Small amount of irrigation works which have been carried out in the country west of Agra, *Glover* 2174-2177.

Advantage of waterworks in the fact that a large proportion of the outlay in their construction remains in the country itself, whereas in the case of railways a large amount goes out of the country, *Wood* 2292.

Preference for railways to irrigation works as regards the means of conveying food during famine times, *Lord* 2544, 2545—Considerable protection against famine by means of increased irrigation works, *Conway-Gordon* 3510.

Total of 3,500,000 *l* proposed by the Government of India to be spent upon irrigation in the next five years from borrowed money, and of 1,250,000 *l* from the Famine Insurance Grant, *Waterfield* 6389.

Summary of capital outlay on productive works of irrigation and navigation in each year since 1867-68, *App.* 557. 726, 727.

Amount of annual expenditure for protective works since 1881-82, *App.* 693.

Amount of capital outlay in each year since 1867-68, *App.* 698, 699

Expenditure on irrigation works (famine relief, &c.) in each year since 1881-82, *App.* 714, 715.

Abstract statement of annual working expenses, *App.* 738, 739.

Jaitpore to Verawal. Approval of a line from Jaitpore (Katiawar) to Verawal, where there would be large traffic to visit the temples of Dwarka, *Ashburner* 6339. 6445-6447.

Jhansi-Bargarh Railway Particulars respecting this line, as proposed by the Government of India, in January 1883, *App.* 524. 633.

Jhansi-Cawnpur Railway Statement that the district between Jhansi and Cawnpur may be called one field of grain, extending a few miles only from the trunk road, plenty of land available for cultivation beyond this limit, *Glover* 2048-2051 2056, 2057 2163-2166

Decided opinion that the Jhansi, Gwalior, and Cawnpur is a line which should induce capitalists to support it without a Government guarantee, intention of witness to invest largely in it, whether he (as contractor) makes the line or not, *Glover* 2128-2131.

Information generally with reference to the proposed line from Jhansi to Cawnpur, contention that there is no need for this line for commercial purposes, although it may be needed as a famine line, *Crawford* 3664, 3665 3672-3681 3754-3758 3884-3897-3930-3933 3945 3985, 3986—Considerable difference in the opinions of Mr Glover and Dr Hunter on the subject of the fertility of the country between Jhansi and Bhopal, *ib.* 3675-3677. 3857-3861 3930-3933.

Documentary evidence submitted by Major Conway-Gordon, showing the views of the Government of India and of the Madras Government in favour of the construction of this line, approval on the part of the Secretary of State, *App.* 900-902 920

See also *Bhopal to Jhansi, Gwalior, and Cawnpur.*

Jhansi-Mankpur Railway. Statement by the Government of India that it would be fatal to construct the line from Jhansi to Mankpur upon any other than the broad gauge, as it would connect the Bhopal line to Cawnpur with the East Indian Railway, *Chapman* 871—Explanation as to the grounds for constructing the line from Mankpur to Jhansi on the metre gauge, *Trevor* 1818-1822

Information respecting the proposed line from Jhansi to Mankpur, considerable expense in regard to the coal traffic on account of the difference in gauge between that line and the East Indian, *Crawford* 3754-3758 4009-4018—Belief that the new line from Jhansi to Mankpur will partially serve the purposes of a famine line through that district, *ib.* 3754-3758

Instance of the Jhansi-Mankpur Railway as a good example of the difficulties resulting from the want of any principle as to the application of the two gauges; deadlock in the construction

Jhansi-Manikpur Railway—continued.

construction of this line owing to differences between the Home Government and the Government of India on the question of gauge, *Conway-Gordon* 4595-4615, 4620-4634 — Diversity of opinion between the Government of India and the Secretary of State with regard only to the difference in cost between the broad and narrow gauge construction on the Jhansi-Manikpur line, *ib.* 5364, 5434-5437.

Desire on the part of the Indian Government that the present Committee will recommend the construction of the Jhansi and Manikpur line upon the broad gauge; if this line be made on the narrow gauge it would, in the event of famine, lead to delay and loss of life, *Hunter* 7152, 7409-7415 — Contention that the difference of opinion between the Government and the Secretary of State in regard to the Jhansi-Manikpur line has had the effect of delaying progress, *ib.* 7226.

Information respecting the districts which will be protected by the construction of the Jhansi-Manikpur line, if sanctioned, complete communication with the food-producing countries by this line, conditional on the whole of the Government proposals for the district being carried out, *Hunter* 7288-7302.

Despatch from the Government of India to the Secretary of State, dated 18th August 1883, submitting a revised scheme for the construction of a broad gauge line from Jhansi, via Banda, to Manikpur on the East Indian Railway; estimates of cost and traffic, great importance being attached to the line, *App.* 785-787.

Documentary evidence submitted by Major Conway-Gordon respecting this line, a proposed by the Government of India, its advantages, estimated cost, &c; and sanction given by the Secretary of State, *App.* 859-862, 919.

Sanction not yet given to the difference between the cost on the broad gauge and the cost on the narrow gauge, *App.* 859, 860, 920.

Provision for the wants of Bundelkund by this line, *Rep.* vii.

Jhagharpur-Dinapur Railway. Documentary evidence submitted by Major Conway-Gordon respecting this line, as proposed by the Government of India, its advantages, estimated cost, &c., sanction given by the Secretary of State, *App.* 876-879, 919.

Jubbulpore-Gondia Railway. Length and cost of this project, as proposed by the Government of India to be left to private enterprise, *App.* 529.

Jullundur-Hoshearpur Railway. Conclusion that the Jullundur-Hoshearpur line, which is twenty-six miles long, would be exceedingly useful, *Conway-Gordon* 5400.

Jute. Importance of increased facilities for the transmission of jute and other products from districts at present unserved by railways, *Birkmyre* 3478-3481.

Kalpi to Cawnpur. Desirability of a line from Kalpi to Cawnpur, which would be very inexpensive, as the country is quite flat, without waterway, *Crawford*, 3777-3779.

Kandahar. See *Indus Valley and Kandahar Railway.*

Karwar-Hubli Railway (Bombay) Length and cost of this project, as proposed by the Government of India, to be left to private enterprise, *App.* 531.

Katna-Comeria-Bilaspur Railway. Particulars respecting this line, as proposed by the Government of India in January 1883, *App.* 527.

Kattywar Construction of some railways in Kattywar by the native chiefs; desire of the latter for a junction of these lines with the Rajpootana Railway, *vid* Veerungum, *Anderson* 717-723, 732, 733.

Willingness of the native princes of Kattywar to subscribe capital towards the construction of certain local lines, *Anderson* 718-723, 735, 736.

Khangaon Railway. Statement showing, for each year, the mileage, average age, cost, and general results of working, *App.* 780, 781.

Kutni to Calcutta. Approval of the construction of a line from Kutni to Calcutta, as suggested by the Secretary of State, for the purpose of giving access to the coal deposits in the Rewah country; statement as to the good character of this coal and its estimated cost of production, *Crawford* 3687-3690, 3768-3773, 3824-3830, 3954-3957, 3987-3989.

L

Labour See Employment. Wages

Laltpore-Katni-Bilaspore Particulars respecting this line, as proposed by the Government of India in letter of 23rd January 1883, *App* 513, 514.

Land (Railway Extension) Statement that as regards the lines left to be undertaken by assisted private enterprise the Government will merely grant the land free of cost, *Conway-Gordon* 3499-3501

Explanation that the land will be given by the Government of India to any company desiring to take up a line, but beyond this assistance Government will not go, *Westland* 4991-4997.

Land, free of cost, given to the companies under the different plans or terms on which railway construction has of late been carried out, *Rep.* x

Land Revenue. Effect of the railways in increasing the product of the soil, but not indirectly enhancing the amount of the land revenue, *Strachey* 353-355—Receipt of 22,000,000*l.* a year from land, *Sir J. Caird* 657—Increase of the land revenue consequent upon railway extension, *Conway-Gordon* 4268, 4269; *Danvers* 6887 7021.

Conclusion that in the event of financial pressure through the railways not paying, the Government would not resort to the raising of the land-tax, *Westland*, 5338-5346—Obstacle to sudden increase of the land revenue receipts; explanation that increase arises partly from land being brought into cultivation, and partly from higher prices and new settlements, *ib* 5344-5346.

Undoubted opinion that railways develop in a remarkable way the resources of the country, examples of large increases of land revenues which have taken place in consequence of the proposal for the Western Deccan line, *Ashburner* 6343, 6344 6405-6414. 6426 6437, 6438—Very small increased taxation in regard to the land revenue as compared with the extra profits derived from the land, *Hunter* 7217, 7218

Benefit to some extent to the land revenue by reason of the extension of railways and the increased facilities for the export of wheat, &c., *Rep.* vii.

Limited Guarantee See *Bengal Central Railway. Guarantees, &c*, 4, 5 *Southern Mahratta Company.*

Liverpool. Sundry details and explanations as to the views of the Liverpool Chamber upon the question of railway extension in India, *Coke* 1256 *et seq.*—Explanation that Liverpool is the port of import for the greatest amount India produces, *ib*. 1256-1258—Resolution passed by the Liverpool Corn Trade Association in favour of railway extension in India, *ib*. 1267.

LOANS (RAILWAYS, &c)

1. *Views of General Strachey upon the Question of Borrowing in England or in India; Expediency of Limiting the Creation of Sterling Debt.*
2. *Explanations and Suggestions by Mr Hardie, with reference more especially to the Question of Sterling Loans in England, or of Rupee Loans in India.*
3. *Views of Major Conway-Gordon as to the Annual Amount to be Borrowed for Railways, &c, and as to the Expediency of issuing Loans in England*
4. *Evidence of Mr Crawford strongly in Favour of Loans being raised in India*
5. *Explanations and Suggestions by Mr. Westland respecting the Amount of Government Loans and the Financial Result of Borrowing in Sterling in England, or in Rupees in India*
6. *Information supplied by Mr. Waterfield, together with Suggestions as to the Issue of Loans in India or in England*
7. *Suggestions by other Authorities as to the Amount to be Borrowed for Railways, and as to the Question of raising the Money in England or in India.*
8. *Concurrence of Opinions favourable to Rupee Loans in India, Difficulty as to Native Investment, on account of the Low Rate of Interest*
9. *Amount of outstanding Loans or Debt; extent to which taken up or held in India*
10. *Communications from the Secretary of State in Council and the Government of India.*
11. *Summary by the Committee, and Conclusions arrived at.*

LOANS (RAILWAYS, &c.)—continued.

1 *Views of General Strachey upon the Question of Borrowing in England or in India, Expediency of limiting the Creation of Sterling Debt.*

Grounds for the conclusion that it is exceedingly unwise to increase the sterling liabilities of the Secretary of State, either in the shape of a guarantee of interest in sterling or the creation of sterling debt, *Strachey* 197-223 — Opinion that the power of borrowing in sterling should be reserved for times of difficulty and occasions of emergency, *ib.* 197—Compulsion upon the Secretary of State by the force of financial circumstances to borrow in England, though he has tried very hard to avoid it, *ib.*

Facility, even in the time of the Mutiny, with which loans have been raised in England, including the money required for the guaranteed companies, *Strachey* 267-271—Statement as to it never having been attempted to bring out a rupee loan in England, *ib.* 1267-1209.

2. *Explanations and Suggestions by Mr. Hardie, with reference more especially to the Question of Sterling Loans in England, or of Rupee Loans in India.*

Information generally respecting the Government loans in India; those loans have been largely absorbed in England of late years, *Hardie* 2795-2809, 2837-2839, 2887-2893, 2910-2926, 2959-2972, 2982-2987, 2997-3012, 3015-3043—Tendency of the suspension of the Bland Bill to deter capitalists in England from taking up loans in silver, *ib.* 2798-2800, 2911-2914, 2921, 2997-2999—Belief that there are causes at work at the present time which will make it difficult in the future for the Government of India to get loans in the country itself, *ib.* 2799—Statement that the last loan fell almost entirely on the Indian money market; great rise in consequence in the rates of interest, *ib.* 2800.

Impossibility of laying down any fixed rule as to the amount of the Government loan to be offered annually to the Indian market, *Hardie* 2801-2805—Decision of the Government not to give further loans to local bodies, the result of this decision will be that in future these bodies will compete with the Government in regard to loans, *ib.* 2806-2808, 2887-2889—Greater difficulty in the future for the Government to obtain loans on account of the local bodies being forced into the market to compete, expediency, for this reason, that the Government should be left free to borrow anywhere in the open market, *ib.* 2807-2809

Grounds for the conclusion that if loans are to be raised in gold, they should be raised in England and not in India, impossibility for the Government to borrow in India in silver at the present time, except upon prohibitive terms, *Hardie* 2913-2926—Strong opinion that looking at the financial interests of India alone, it is advisable that all loans should be raised in England and not in India, *ib.* 3005-3034.

Advantage in borrowing in India to the extent to which loans can really be absorbed in that country; small amount thus available annually, *Hardie* 3010-3014, 3019-3027, 3043—Expediency of the Government issuing their loans in sterling instead of silver, this course having the effect of re-assuring the public, and of leading to a considerable rise in the price of rupee loans, *ib.* 3039-3042.

3. *Views of Major Conway-Gordon as to the Annual Amount to be Borrowed for Railways, &c., and as to the Expediency of issuing Loans in England*

Explanation respecting the proposals of the Government of India in regard to altering the limits now fixed for direct borrowing on productive public works; desire to increase the amount for railways alone, and not to alter that for irrigation purposes, *Conway-Gordon* 3540-3548.

Desirability that the limit placed on the borrowing powers of the Government should be elastic, and only put into practical operation in extreme cases; obvious expediency that the Government should have power to push on their works rapidly when money is cheap, *Conway-Gordon* 3551-3553, 3597, 3598—The one important point in regard to this limit should be, that the borrowing should never be pushed at such a rate as to injure the credit of the Government, *ib.* 3553, 3594.

Conclusion that the principle laid down by the Select Committee of 1879 in regard to borrowing by the Indian Government was a sound one, *Conway-Gordon* 4077, 4312—Opinion that the Secretary of State unduly restricted the recommendation of the Committee of 1879 in regard to requiring that the money should be borrowed in India; belief that it would be wise at the present time to borrow in London the whole amount required for public works in India, *ib.* 4243-4257—The responsibility for the late borrowing in India and not in England rests entirely with the Secretary of State, *ib.* 4246, 4247.

Conclusion that one great objection to rupee loans is that the Government become competitors in the money market, and so drive up the commercial rate, *Conway-Gordon* 5537-5539.

LOANS (RAILWAYS, &c)—continued

4. Evidence of Mr. Crawford strongly in Favour of Loans being raised in India :

Grounds for the opinion that the principle of borrowing money in England for railway extension, and so imposing a heavy addition to the liabilities of India, is altogether wrong, belief that there is in India a sufficient amount of money, and that it should be borrowed there, even though at a higher rate than in England, *Crawford* 3693-3695, 3720-3727 3811-3815 3834-3839.

Suggestion that a loan should be issued in India without the privilege of receiving interest in England in the form of bills of exchange; strong belief that this course would be successful in obtaining the money in India from wealthy natives, *Crawford* 3694, 3695—Statement that 4 and 4½ per cent. loans were taken up readily by natives in former times, *ib* 3723, 3724.]

Further examination as to the expediency of raising the necessary funds in India for the projected railways, rather than in England, argument that the present generation are not justified in getting advantages at the expense of the future by the accumulation of debt year by year against the natives of India, *Crawford* 3936-3942. 3970-3979

Decided opinion that regarding the interests of India, there is too much money being borrowed on her account in England, *Crawford* 3972-3975—Entirely different principles which govern the circumstances connected with loans to India and loans to America or Australia raised in England, *ib*. 3973. 3976-3979.

5. Explanations and Suggestions by Mr. Westland respecting the Amount of Government Loans, and the Financial Result of borrowing in Sterling in England, or in Rupees in India.

Information generally with reference to the borrowing operations of the Government; statement that these operations always exhaust for the time the whole resources of the Indian market, *Westland* 4785-4808. 4833-4844. 4961 4966. 4962, 4963 4979-4990 —Large amount of permanent investment in the Government loans taken up in England, *ib* 4787-4790

Decided opinion that at the present time two and a-half crores is too much to throw each year upon the Indian market, *Westland* 4791—Statement that the difficulty of borrowing in India is increasing, while on the other hand the facility of borrowing in London is also increasing, *ib* 4792-4795. 4841, 4842. 5087-5090. 5289-5296

Information as to the net result to the Government in regard to raising loans in sterling in England as compared with raising them in rupees in India, smaller percentage paid for the loans in England, than is paid in India for rupee loans, *Westland* 4801-4804

Strong opinion that the Government should be left with free hands as regards borrowing, and that there should be no hard-and-fast rule on the subject, contention that this freedom should apply not only to the place of borrowing but to the limit of the amount, *Westland* 4805-4807.

Conclusion that if the Government were to come into the London market to borrow five millions annually, they would have to pay more than they do at present, *Westland* 4951 —Grounds for the opinion that the liability for the loans should be divided between the Government and the guaranteed companies, *ib* 4980-4990.

Additional examination with reference to the financial results of borrowing in India or in England; argument that there is no saving by borrowing large sums in England, as the difference in cost is a matter of account, and not an actual saving, *Westland* 5072-5097 5119, 5120. 5289-5303. 5356-5362.

Belief that as regards the increase of sterling borrowing in England, the interest on which has to be remitted from India, the exchange will adjust itself, and that although it may do so at a lower rate it will not be a calamity for India, *Westland* 5215-5219 —Grounds for considering it expedient to raise as much as possible in India of the money required for the Government proposals as to railway extension, *ib* 5302, 5303

Paper submitted by Mr. Westland, dealing with the question of loss or gain by substituting sterling borrowing for rupee borrowing; correction of misapprehensions on various points, *App* 624-629.

Consideration by Mr Westland of the financial results of the proposals of the Government of India as regards railway extension, conclusion that a considerable margin exists after undertaking the whole of the proposed lines, *App* 640-645

6. Information supplied by Mr Waterfield, together with Suggestions as to the Issue of Loans in India or in England :

Rule laid down by Lord Salisbury in 1874, that all money required for railways should be raised in India, *Waterfield* 6039-6045 —Sources from which the money laid out on canals and railways during the past five years has been supplied, *ib*. 6088

Examination as to the mode intended to be adopted by the Government of India to

LOANS (RAILWAYS, &c.)—continued.

6. Information supplied by Mr. Waterfield, &c.—continued.

raise money for the proposed works during the next five years, thirty millions sterling to be borrowed in the open market during this period, *Waterfield* 608g-6098, 6104, 6105, 6117-6119, 6121-6130, 6132, 6133, 6160-6170, 6184-6192—Absence of restriction on the Government of India as regards the amount to be borrowed in India; in England the power to borrow is strictly limited by Parliament to a specified amount, *ib.* 6091, 6095.

Necessity of obtaining an Act of Parliament if it be intended to adopt a system of borrowing in England; unwillingness hitherto on the part of Parliament to entrust large borrowing powers to the Home Government, *Waterfield* 6097, 6098—Explanation as to the saving by borrowing in England if exchange were to remain unaltered, impossibility for various reasons of laying down a precise rule as to the line to be drawn between borrowing in India and in England, *ib.* 6118, 6119.

Further examination relative to the mode of raising money for the proposed works; calculation that the saving by borrowing in England as compared with borrowing in India is about a half per cent., *Waterfield* 6196-6200, 6221-6239, 6249-6253, 6260-6267, 6289-6295, 6304-6309—Admission that the objection to borrowing is minimised if the borrowing takes place in that metal which is used in the currency of the country, *ib.* 6224.

Impossibility of borrowing in India even at an extra cost of a half per cent., sufficient money to carry out the proposals of the Indian Government for the next five years, *Waterfield* 6226, 6227—Conclusion that the question of putting out a loan in the Indian money market is one merely of price; belief that there is no reason to suppose that money cannot be borrowed in rupees if the amount be not too large, *ib.* 6251-6253.

7. Suggestions by other Authorities as to the Amount to be borrowed for Railways, and as to the Question of raising the Money in England or in India :

Conclusion as to the necessity of borrowing from Indian railways in England, as being the cheapest market, *Sir J. Caird* 48—Facility with which the Government might raise for the next six years 3,000,000 L. a year in the London market, at a low rate of interest, in addition to a similar expenditure out of the revenues of India, for the extension of railways, Government taking all the risk and all the control, *ib.* 598-602.

Desirability of raising the necessary capital by means of private companies; expediency at the same time of the Secretary of State being free to utilise both the agencies of State railways and of companies, according to circumstances, *Chapman* 741-743, 901, 902—Disapproval of placing any limit on the borrowing powers of the Indian Government for the purpose of railways, *ib.* 906—Contention that it is immaterial whether loans are raised in India in silver or in gold, explanation that borrowing in silver is entirely nominal, as it does not represent a payment on the part of the people who use silver, *ib.* 923-925.

Consideration of the subject of raising money for the construction of Indian railways; assertion that the capital required cannot be raised in India, *Coke* 1274-1280, 1288-1290, 1334-1340, 1350-1363, 1368-1370, 1392—Statement that the public in England trust the credit of the Indian Government much more than they do that of many foreign Governments in regard to investments, *ib.* 1278-1280—Opinion that fifty millions in five or six years is a comparatively small sum for the London market to find, *ib.* 1279, 1280.

Belief that the result of borrowing five or six millions annually in the London market would be injurious to the credit of the Government, *Trevor* 1669, 1670, 1772-1776, 1801-1804.

Considerations as to the best means of raising the capital necessary for the proposed railway, belief that the required amount can only be raised in England, *Bullen-Smith* 2312-2320, 2328-2337, 2377-2383—Belief that the rates of money in England and India are gradually approximating to each other, although the normal rate of money for purposes generally is considerably higher on that side than on this, *ib.* 2335.

Means to be adopted for raising money for the construction of the proposed lines; grounds for the opinion that it is of no use to look to India for any portion of the capital, *Bythell* 2610, 2612, 2711.

Suggestion with reference to the means by which money for railways should be raised; that is, by loan in London, it being the cheapest market, *Birkmyre* 3353-3358, 3378.

Expediency of leaving the question of railway finance to be settled between the Government of India and the Secretary of State, *Ashburner* 6402-6404.

Information generally with reference to the Government Rupee Loans; statement also

LOANS (RAILWAYS, &c.)—continued.

7. *Suggestions by other Authorities as to the Amount, &c.—continued.*

also as regards the capacity of the Indian and of the English markets to absorb the capital required, *Robertson* 6548-6550. 6570-6582. 6602-6608. 6647-6651. 6656-6661. 6687-6691.

Strong opinion that the consolidation of the existing Rupee Loans into one or two loans would greatly tend to make them popular, both in England and in India, *ib* 6550. 6687-6691.

Belief that it would be impossible to control the companies in regard to where they should borrow their money, conclusion that they would borrow in the cheapest market, which would be this country, *Robertson* 6647-6651—If there is to be any considerable extension of the railway system in India it will be necessary to borrow largely in England, either through companies or in connection with the Government, *ib* 6659, 6660—Desirability that the Government should in the present uncertain state of the silver market restrict its liability in respect of sterling loans in this country as much as possible, *ib* 6661.

Evidence as to the means to be adopted for raising money for the construction of new lines, expediency, if it be practicable, of borrowing in India rather than in England, *Danvers* 6872 6874. 7028-7050 7072-7075—Desirability of leaving the Government to exercise its own discretion as to borrowing, *ib* 6872.

Examination with regard to the principle to be adopted in reference to the borrowing arrangements of the Government, opinion that the present Committee should fix a limit of three and a-half millions as the annual amount to be borrowed for railway construction, *Hunter* 7158. 7171-7184. 7228-7230. 7335-7347. 7427-7434.

Views of the Bombay Chamber of Commerce as to the expediency of the money being raised in London by sterling loans, *App* 601

Memorandum submitted by Mr. Wood in connection with tables showing the advantages of taking up Indian loans in England instead of in India, *App* 691, 692.

8. *Concurrence of Opinions favourable to Rupee Loans in India; Difficulty as to Native Investment, on Account of the Low Rate of Interest.*

Suggestions as to the best mode of inducing the natives of India to invest in the loans to be raised for railways, grounds for the opinion that interest at four per cent. would be quite sufficient to pay on a Rupee Loan in India with this object, *Coke* 1350-1363

Additional evidence as to the means to be adopted for raising the capital necessary for the construction of Indian railways; desirability of establishing a system of open loans by which the people would have an interest in the government of the country, which they would not have otherwise, *Coke* 1431-1440 1466-1470.

Small amount invested by natives in Government loans when only four per cent. can be obtained; interest received by natives in Calcutta for private loans at from ten to fifteen per cent., *Hardie* 2837-2839. 2915. 2976-2981. 2988-2996—Great importance that the Government of India should borrow from the natives to the utmost extent to which they are willing to lend, *ib* 2961—Great political advantage that the natives should have a direct pecuniary interest in the finances of the State, *ib* 2961. 3020-3022—Very limited extent to which money at four per cent. can be borrowed in India, on account of the advantageous terms on which advances can be made on mortgage, *ib* 2988-2996.

Evidence strongly in favour of the loans required for new railways being raised in India instead of in England, importance of native capital being thus invested, *Crawford* 3693 *et seq.*; 3936-3942. 3970-3979.

Unsuccessful efforts made in India since 1870 to induce the masses of the people to invest small amounts in Government loans, stock notes for sums varying from 12½ to 100 rupees issued at the treasuries throughout the country, *Westland* 4792-4795. 4841-4842—Provincial debentures at 4 and 4½ per cent. in connection with public works also issued, but not successfully taken up by the people, *ib* 4793-4795.

Further explanation of the reasons for the difficulty which exists at present in regard to borrowing in India, opinion that the accumulations of money are only in the hands of those natives who follow mercantile pursuits, and that they will not invest in 4 per cent. loans, *Westland* 5289-5296.

Statement with regard to the financing of railways that every attempt to raise money in India on a large scale has been a failure, *Rendel* 5698

Opinion that the construction of public works from borrowed money, if raised in India, will be an unmixed good; belief, however, that directly the money has to be procured from abroad an element of danger comes in, *Waterfield* 6104. 6221.

Belief that loans in silver, upon which interest was payable in Calcutta, would not

Report, 1884—continued

LOANS (RAILWAYS, &c.)—continued.

8. *Concurrence of Opinions favourable to Rupee Loans in India, &c.*—continued.
 be taken up in India beyond the extent of about a million and a quarter a year, *Robertson* 6607, 6608. 6658.

Conclusion as to the expediency of borrowing as much as possible in India, *Daniels* 6872. 6874. 7028-7050. 7072-7075

9. *Amount of outstanding Loans on Debt, Extent to which taken up or held in India:*

Large amount of Government 4 per cent. rupee paper held by natives, description of the class of natives who invest their savings in this way, *Hardie* 2978-2981—Considerable amount of Government paper in the hands of natives, upwards of twenty millions sterling being held in the year 1878, *Conway-Gordon* 4484, 4485.

Particulars as to the class of people in India who in the first instance take up the loans, instance of a doorkeeper in the bonded warehouse at Calcutta, whose salary was 12 rupees a month, and who was a large and successful dealer in Government paper, *Westland* 4786—Distribution of the debt of India as held by natives in India, Europeans in India, and the amount encased to London, *ib.* 4800.

Information as to the Indian debt, which at the 31st March 1883 amounted to 159,274,000 *l.*; the increase of debt between 1871 and 1883 amounted to 50,359,000 *l.*; *Westland* 5177-5179. 5186-5193—Calculation that from 1870 to 1883 the rupee debt in England had increased by 24,000,000 *l.*, *ib.* 5191, 5192

Statement as to the increase of the rupee debt since 1813; one-fourth of the rupee securities held by natives and three-fourths by Europeans, *Waterfield* 6093—Fluctuations in price of the 4 per cent. rupee securities since 1861, when they were at 71, price of these securities unduly high in recent years owing to exceptional circumstances, *ib.* 6117.

10 *Communications from the Secretary of State in Council and the Government of India:*

Despatches from the Secretary of State, and letters in reply from the Government of India, in the period from 6th January 1881 to 29th January 1884, respecting railway extension, the progress to be made, the amount of money to be raised for the purpose, and the means of meeting the interest on outlay, *App.* 488 *et seq.*

Explanations in detail in letter from Government of India, of 23rd January 1883, respecting the amount of expenditure proposed, and the means of meeting the same, by loan and otherwise, *App.* 509-533.

11. *Summary by the Committee and Conclusions arrived at*

View of the Select Committee of 1878-79 in favour of loans for public works being raised in India, *Rep.* iii

Facility in borrowing the requisite capital at a cheaper rate than in former years, *Rep.* viii

Concurrence of evidence as to the limited amount which can be raised annually in India, *Rep.* ix.

Opinion that if the capital required could be really obtained from Indian sources the advantage of borrowing there, as compared with borrowing in England, would be very great, *Rep.* xi.

Political as well as financial reasons for raising loans in India rather than in England, *Rep.* xii—Belief however that rupee loans, which are not really absorbed in India, do not differ materially from sterling loans in their effect upon exchange, *ib.*

Great difficulty in arriving at any definite conclusion respecting the sum which may, on an average of years, and with safety to the finances, be annually borrowed for the construction of public works, *Rep.* xiii.

Opinion that whilst the present limit of annual borrowing, fixed by the Committee of 1878-79 at 2,500,000 *l.*, might safely be enlarged, the full responsibility of deciding upon the amounts to be borrowed from year to year should rest with the Secretary of State in Council, *Rep.* xiii.

Concurrence in the recommendation of the Select Committee of 1879, that when the difference between the rates of interest in India and in England is so considerable as to afford full compensation for the great comparative disadvantages which inevitably attend borrowing in this country, the Secretary of State should not hesitate to borrow such moderate

LOANS (RAILWAYS, &c)—continued.11. *Summary by the Committee, and Conclusions arrived at*—continued

moderate sums here, as will enable the Government of India to complete such public works as shall have obtained his sanction, *Rep* XII

See also *Capital Exchange, Loss by. Expenditure (Railways). Extension of Railways Financial Condition of India. Guarantees, and Guaranteed Railways. Private Enterprise. Productive Lines Protective Lines*

Local Capital. See Loans. Native Capital.

Local Taxation and Administration Approval under certain limitations of power in the localities or the provincial governments to levy a railway cess, in order to make up the required rate of interest on new lines, that is, in the case of productive districts, *Strachey* 187-196 272-274—Doubt as to the expediency of a system of local railway cess in aid of interest on protective lines, *ib.* 192-196.

See also *Administration and Management. Provincial Governments*

Local Traffic Greater importance of creating local traffic than of considering export traffic with communications to the sea, *Rendel* 5662-5665 5975-5990.

Locomotives See Engines and Rolling Stock Working Expenses

Lord, George (Analysis of his Evidence).—Is a merchant in Bombay, Manchester, and Liverpool, has been President of the Chambers of Commerce in Manchester and Bombay, 2460

Information generally as to the benefit to India which would result from an extension of railways, details illustrating the great increase in the Indian trade of late years since the introduction of railways, 2461, 2462. 2494 2532, 2533—Statement that cotton is one of the largest exports from India, great advantage of railways in bringing the merchant into contact with the grower, 2461. 2551-2559—Important fact that the Indian cotton competes on favourable terms with that raised in America, beneficial effect of the railway which was constructed lately between Ahmedabad and Ajmeer, which brings cotton to Bombay instead of to Calcutta, as formerly, 2461, 2462.

Contention that the extension of railways will lead to a largely increased cultivation of wheat, and also to a material rise in the price, statement that wheat 200 miles from any railway is worth at the present time 20 d. per 200 lbs., 2462 2494 2507-2511. 2560-2567. 2572-2579

Large extent to which the railways in India conduce to the employment of labour, statement that 95 per cent. of the employés are natives, 2462—Conclusion that apart from protection and relief from famine, the extension of the railways has greatly benefited both the trade and people of India, 2462.

Suggestions as to the districts most in need of new railways, great importance of a line from Bhopal to Jhansi and Gwalior, with an extension to Cawnpur, 2463-2477—Immense advantage to Bombay and also to Calcutta of the proposed Nagpur and Bengal line, opinion that this line would not injuriously affect the traffic to Calcutta, 2463-2468 2475.

Suggestion that the Bhopal line should be constructed on the broad gauge, 2460—Expediency of extending the existing line from the Bombay and Baroda railway to Godra, as far as Rutlam, 2475, 2476—Approval of the construction of the protective lines which have been recommended by the Famine Commission, 2477

Strong feeling that there should be no break of gauge upon the Indian railways, 2478—Decided opinion that it would be a disastrous arrangement if the narrow gauge were to be adopted upon any of the main lines of communication, contention also that all the railways in the great plains of Northern India should be on the broad gauge, 2478, 2479 2534-2535

Grounds for considering it expedient to carry out railway schemes by means of private companies, with modified guarantees from the Government; very great difficulty which would arise in organising a staff of engineers, if the Government took the construction upon themselves, 2480-2483 2501, 2502 2537-2543—Approval of the system of guarantee given by the Government to the South Mahratta Company; statement generally in regard to the terms given to this company, 2480-2482. 2514, 2515.

Evidence as to the proper means to be adopted for raising the capital necessary for the proposed railways, belief that there is in India large quantities of money available for the works, 2484-2489 2495-2498. 2517-2531. 2546-2550 2580-2604—Opinion that one-fourth of the total amount required annually could be raised in India; explanation as to the previous reluctance of the natives to invest in Government securities, 2484-2487 2516.

Grounds for the view that the financial operations of the Government in respect to loans would have but a very small effect on the exchange; steadiness in the rate of exchange

Report, 1884—continued.

Lord, George. (Analysis of his Evidence)—continued.

exchange during the last five years, 2489-2494, 2499, 2500—Increased export goods from India which would follow on an extended railway system, 2503-2505.

Statement that the only difference of opinion between witness and the Chamber of Commerce of Bombay is in regard to their proposal that twenty millions should be spent annually upon railways, contention that ten millions annually is enough, 2512, 2513—Preference for railways to irrigation works as regards the means of conveying food during famine times, 2544, 2545—Strong opinion that the Government should, when giving a guarantee, take power to control the rates, 2568-2571.

Loss of Life. See *Famines*, &c.

M.

Madakira District. Statement showing the area population, and loss of population during the famine in this district, *App.* 587.

Madras Chamber of Commerce. Views of the Madras Chamber as to the expediency of pushing on the famine lines with greater speed, *Westland* 4762.

Resolution of the Chamber in October 1883 in favour of an extended system of borrowing for the more rapid extension of railways, *App.* 586.

Madras (Coast Line). Sufficiency of the metre gauge for the proposed line to Cuttack in Orissa, with extensions along the Madras coast; probability that a narrow gauge line would pay, *Sir J. Caird* 403-406, 516—Question considered as to the saving by adopting the narrow instead of the broad gauge for the proposed coast line between Madras and Calcutta; *ib.* 497-500.

Great importance further attached to a line from Calcutta to Madras, passing through and connecting the rich country of Orissa, with the country of the Godavery and the Krishna, *Sir J. Caird* 588-593, 660.

Grounds for the view that the proposed coast line from Madras to Calcutta is a good example of a line that ought not to be made, *Wood* 2281, 2382.

Practical impossibility to construct a coast railway from Calcutta to Madras, on account of the cost of bridging the numerous rivers, *Westland* 4941.

Madras Irrigation and Canal Company. Unsatisfactory results in the case of the Madras Irrigation Company, *Strachey* 239, 240.

Madras Presidency. Nature of the facilities for the relief of famine in Madras and Southern Bombay, favourable situation of Madras for receiving supplies by sea, *Sir J. Caird* 576-579.

Particulars respecting the several lines proposed by the Government of India in January 1883, *App.* 524-526, 531.

See also the *Headings generally throughout the Index*.

Madras Railway. Importance of the Madras lines for the prevention of famine, though they have not been remunerative, very heavy cost of construction, *Sir J. Caird* 440-442.

Statement that the Madras, and the Oude and Rohilkund Railways, may be considered as commercial failures, explanation that the failure of the Madras Railway was owing to the fact that it was so laid out that it avoided every town, *Conway-Gordon* 4493-4496—A comparison between the South Indian and the Madras lines is not an entirely fair one, because of the expensive management of the latter, *ib.* 6737, 6738.

Revenue accounts of the Madras Railway for each half year from 31st December 1881 to 31st December 1883, *App.* 750, 761.

Statement showing for each year the mileage, average age, cost, and general results of working, *App.* 772, 773.

Statistics of the cost of working under different heads, *App.* 798 *et seq.*

Maintenance, Cost of. Statement that the cost of maintaining the narrow gauge is greater in proportion to the traffic than the cost of maintenance of the broad gauge, *Trevor* 1739-1746.

Conclusion that the cost of maintenance on the broad and narrow gauge is identically the same; very small amount of difference between the general staff expenses on the two gauges, *Glover* 2252-2260.

Explanation that on all railways the cost of repairs pays for itself, the repairs being in proportion to the traffic carried, *Rendel* 5911-5917.

Explanation

Report, 1884—continued

Maintenance, Cost of—continued.

Explanation that the large difference between broad and narrow gauge as regards maintenance is materially affected by the age of the line, *Conway-Gordon* 6782-6784.

Abstract statistics of the cost of working in respect of maintenance in each half-year from that ending 30th June 1881 to that ending 30th June 1883, *App.* 822-827.

See also *Working Expenses*.

Management of Railways. See *Administration and Management*.

Manchester. Evidence on behalf of Manchester, and the Manchester Chamber of Commerce, *Lord* 2466 *et seq*; *Bythell* 2605 *et seq*; *Graham* 2715 *et seq*.

Manikpur to Jhansi. See *Jhansi-Manikpur Railway*.

Manufactures (India). Effect of extended railway facilities not only in stimulating production, but in leading to an increase of manufactures, *Sir, J. Card* 431-435.—
—Statement that in Bombay some cotton mills have been created, and are carried on extensively by natives, *Hardie* 2937.

Character of the extensive business carried on at Calcutta by witness' firm, who employ about 5,000 natives, 200 criminals, and seven Europeans, manufactures from his firm sent to all parts of the world, *Birkmyre* 3330-3335 3395-3398.

See also *Native Industries*.

Manure. Practice of burning manure as being the readiest and cheapest fuel, very important experiment to the effect that the ashes of burnt manure give a better crop than is given by the manure in a fresh state, *Sir J. Card* 566.

Map of India. Map of India, showing railways open to traffic, under construction, and as proposed by Honourable F. C. Hope, on 1st September 1882, *App.* 522.

Materials, Cost of Construction. *Rails and Sleepers*.

Metre Gauge See *Gauge*.

Mileage of Railways Statements showing the mileage of the principal lines, and the mileage open annually of each railway in India, *App.* 694 770-781.

Paper submitted by Major Conway-Gordon showing the mileage, single as well as double, of all the railways open for traffic on 29th February 1884, *App.* 783.

Military Lines Approval of money being borrowed for lines needed for military purposes, such as the line to Quetta, though not likely to be productive, *Strachey* 18—
Facility from the railways in the movement of troops, doubt, however, whether the existing force in India admits of diminution even if the lines were much extended, *ib.* 1220-1222.

Necessity for special arrangements and negotiations between the Government and private companies in the event of a line being deviated for strategical or protective purposes; belief that the interests of the commercial line to be made would not be antagonistic to those of the strategical line, *Chapman* 845-853.

Capital outlay on military works in each year since 1867-68, *App.* 698, 699.

See also *Quetta Railway*.

Mineral Resources. See *Coal*. *Iron*.

Miscellaneous Expenditure. Statement of the net disbursements of the Home Treasury of the Government of India in respect of miscellaneous expenditure in each year since 1867-68, *App.* 696, 697.

Mogul Serai (East Indian Railway) Proposal that a former scheme of the East Indian Railway for a line from Mogul Serai should be revived; explanation that if this line be made it will shorten the distance between Calcutta and Benares by seventy miles, *Crawford* 3691, 3692 3774-3776. 3914-3918—Calculation showing that an additional traffic of about 340,000 tons, which would be carried by the proposed line from Mogul Serai, would pay the interest upon the cost of construction, *ib.* 3691, 3692. 3717-3719.

Mozufferpore-Haypore Railway. Documentary evidence submitted by Major Conway-Gordon respecting this line, as proposed by the Government of India, its advantages, estimated cost, &c., sanction given by the Secretary of State, *App.* 876-879 919.

Munihara (Branch) Railway Particulars supplied by Major Conway-Gordon respecting this project, its advantages, estimated cost, &c., sanction given by the Secretary of State, *App.* 876-879. 919.

Multra Hatiras Railway. Statement showing for each year the mileage, average age, cost, and general results of working, *App.* 777.

Report, 1884—continued.

N.

NAGPUR AND BENGAL RAILWAY (BOMBAY TO CALCUTTA):

1. *Advocacy of this Line; Importance attached to it by the Government of India.*
2. *Exceptions taken to the proposed Line, as not likely to be Productive.*

1. *Advocacy of this Line; Importance attached to it by the Government of India.*

Approval of the Bombay and Nagpur line being completed to Calcutta on the broad gauge; considerable local traffic expected, *Sir J. Caird* 407, 455, 456, 485-487—Explanation that when the Great Indian Peninsula Railway is extended from Nagpur to Calcutta the total distance between Bombay and Calcutta will be shortened by about 200 miles, *Chapman* 862, 863—Belief that the proposed Nagpur line will be a most valuable trunk railway, and will prove to be the postal line between Europe and Calcutta, *ib.* 872.

Importance of the new direct route from Bombay to Calcutta via Nagpur, being upon the broad gauge, *Coke* 1297, 1300—Value attached to the Nagpur line to Calcutta and the Bhopal line to Cawnpur as the two chief trunk lines to be constructed, *ib.* 1452, 1459.

Immense advantage to Bombay and also to Calcutta of the proposed Nagpur and Bengal line; opinion that this line would not injuriously affect the traffic to Calcutta, *Lord* 2463-2468, 2475—Value of the proposed Nagpur and Bengal line as going through a tract of country south of the East Indian line, *Bythell* 2513.

Statement that it is the deliberate belief of witness that the Calcutta and Nagpur will be a productive line, especially in view of the fact that the small section that has already been made has produced enormous receipts, *Conway-Gordon* 4375—If necessary the construction of the Nagpur line should be undertaken by Government; that is, in the cheapest possible way, and on the broad gauge, *ib.* 4392-4394—Grounds for proposing that the Nagpur line should be made over to private enterprise, *ib.* 4469-4472.

Examination in regard to the difference in cost of transhipment on the Nagpur and on the Rajputana lines; extraordinary variations in the amount of traffic upon these lines in different seasons, *Conway-Gordon* 4650-4693—Grounds for the opinion that the Nagpur line should be on the broad gauge, *ib.* 4712.

Statement as to the negotiations carried on with Messrs. Hoare & Miller with reference to the construction of the Nagpur-Barakur line; postponement of this question by the Secretary of State until the decision of the present Committee, *Conway-Gordon* 5485-5494.

Proposals made by two private firms to undertake the extension of the Nagpur line to Calcutta, determination of the Government in regard to these proposals not yet arrived at, *Waterfield* 6076, 6157-6159.

Great importance of the line from Calcutta to Nagpur, which should be constructed as cheaply as possible, *Danvers* 6891, 6892.

Large commercial advantages which would result from the construction of the line from Calcutta to Nagpur, passing through the Chatusgarh country; estimate that the land revenue would be largely increased by this line, *Hunter* 7144, 7145, 7147, 7149, 7150.

Proposals in letter from the Government of India of 22nd July 1881 for the construction of the line, as one of a series of railways for protection against famine, *App.* 492-495.

Particulars respecting the Barakur-Nagpur project, as advocated by the Government of India; great importance attached to this line, *App.* 527, 879-900, 920.

2. *Exceptions taken to the proposed Line, as not likely to be Productive:*

Disapproval of the construction of a line from Bombay to Calcutta, *Trevor* 1647—Doubtful opinion as to the financial prospects of a line from Nagpur to Calcutta, *Dickens* 3159, 3160.

Grounds for considering that a through line from Calcutta to Bombay via Nagpur, is not required for the development of the resources of the country; the goods traffic between these two places is next to nothing at the present time, nor is there any indication of there being much in the future, *Crawford* 3664, 3665, 3685-3687, 3759-3769, 3934, 3935, 3967-3969.

Objection to the new scheme via Nagpur, on the ground that it is an intrusion of the Bombay system into the East India system; it was a principle when the lines were originally

NAGPUR AND BENGAL RAILWAY (BOMBAY TO CALCUTTA)—continued.

2. *Exceptions taken to the proposed Line, as not likely to be Fructuive*—continued. originally allocated, that one Presidency should not meddle with another in regard to railways, *Crawford* 3634 3919-3926—Opinion that a through line from Calcutta to Bombay would be of no advantage, except for five or six passengers who would travel once a week, *ib.* 3686.

Additional assertion that there is an exaggerated importance attached to the construction of a through route between Calcutta and Bombay; contention that the local traffic between these places is a totally distinct matter from the through traffic, *Crawford* 3910-3913—Conclusion that the Nagpur line to Calcutta would be too expensive, especially as it must cross five immense rivers in its course, *ib.* 3934, 3935.

See also *Barakur-Nagpu Railway*.

Nagpur and Chattisgarh Railway Adoption by the Government of the Nagpur and Chattisgarh line, which runs into a country where there is a large reserve of grain, *Westland* 4749—Large increase of traffic in both passengers and goods on the Nagpur and Chattisgarh Railway, which is a metre gauge line, *Rendel* 5624, 5707—Statement as to the cost of conversion of the gauge of the Nagpur and Chattisgarh Railway, *Conway-Gordon* 6842.

Revenue accounts for each of the years 1881-82, 1882-83, and 1883-84, *App.* 751-753—Also for each half year from 31st December 1881 to 31st December 1883; *ib.* 762-765.

Statement showing for each year the mileage, average age, cost, and general results of working, *App.* 779.

Statistics of the cost of working under different heads, *App.* 798 *et seq.*

Nalhati (State) Railway. Statement showing for each year the mileage, average age, cost, and general results of working, *App.* 776.

Narrow Gauge See *Gauge*

Native Capital. Very limited extent to which local capital is likely to be found for local lines, unless there be the inducement of a sufficient rate of interest, *Strachey* 182-186—It may be said that none of the capital is provided locally, *ib.* 312.

Result of past experience that the required capital for railway extension cannot be obtained from the people of India, or from private sources, so that the State should provide it, *Sir J. Card* 552-559, 561, 612.

Evidence as to the proper means to be adopted for raising the capital necessary for the proposed railways, belief that there is in India large quantities of money available for the works, *Lord* 2484-2487, 2517-2531, 2546-2550, 2580-2604—Opinion that one-fourth of the total amount required annually could be raised in India, explanation as to the previous reluctance of the natives to invest in Government securities, *ib.* 2484-2487, 2516—Belief that a very small fraction of the capital required for railway construction could be raised in India, *Graham* 2746-2748.

Small amount invested by natives in Government loans where only four per cent. can be obtained, interest received by natives in Calcutta for private loans, at from ten to fifteen per cent, *Hardie* 2837-2839, 2915, 2976-2981, 2988-2996—The native traders very seldom have accounts at the banks, *ib.* 2957—Chief business of the natives with the English banks in borrowing money and selling bills, infrequent instances of natives lending money to the banks, *ib.* 2957, 2958, 3013, 3014.

Belief that the natives cannot be induced to invest their savings in railways as they can do much better elsewhere, instance, however, of a small line from Scrafuli, in the Hugh district, which has been taken up principally by native clerks and engine drivers, *Conway-Gordon* 3585-3592.

Circumstance of the Bengal merchants having proposed to undertake railways, *Westland* 4760-4763.

Special reason for raising the money for famine insurance in India in order that native capital might be attracted, and that the interest of the people should be enlisted in works for their own benefit, *Waterfield* 6047, 6048.

See also *Hathras Railway Loans*, *Savings Banks*, *Southern Mahratta Railway Company*, 6.

Native Chiefs See *Kattywar*, *Transit Duties*.

Native Industries. Interference with native industries by the introduction of English fabrics into India, *Sir J. Card* 541, 542.

Opinion that very little Indian capital is absorbed in industrial enterprises of any kind, there is an accumulation of capital in India, but it does not go in these channels, *Bullen-Smith* 2338-2343.

See also *Manufactures*.

Report, 1884—continued.

Native Labour. See *Condition of the People* *Employment*

Native Opinion. Exceedingly small interest taken by the natives in the question of the extension of railways, fear upon their part that such an extension would lead to an increased taxation, *Hardie* 2812-2815 2834-2836. 2974-2993^b 2943-2951. 2973-2975 —Belief that there is no strong feeling on the part of the natives in favour of an extension of railways, *Birkmyre* 3417.

Opinion that although the natives of India dislike our law and our system of land revenue, our roads and railways are decidedly popular with them, *Conway-Gordon* 3562, 3563 3566. 3623, 3624.

Native Princes Belief that the native princes who formerly contributed largely to the East India Company's loans are more in debt than able to contribute money; explanation as to the cause of their present insolvent condition, *Westland* 5294-5296.

Native States (Railways) Revenue accounts of the railways in Native States for each of the years 1881-82, 1882-83, and 1883-84, *App.* 751-753 —Also for each half-year from 31st December 1881 to 31st December 1883, *ib.* 762-765.

Statement showing for each year the mileage, average age, cost, and general results of working, *App.* 780, 781

See also *Kattywar.* *Nizam's Railways.*

Nerbudda Coal and Iron Company Statement respecting the operations of the Nerbudda Coal and Iron Company; belief that the company did not undertake any obligation to work the iron, *Strachey* 541.

Nizam's Railways Illustration in the case of the Nizam's railways of the operation of speculators, rather than investors, in taking up stock issued under certain conditions, *Strachey* 85, 86. 1198-1202 —Disappointment to the syndicate who took up shares in the Nizam's railways which are still at a considerable discount, *ib.* 255.

Proposal as to the construction of 2,000 miles of railway in the Nizam State, which, if constructed on broad gauge, will require twelve millions, and if on the narrow, nine millions sterling, contention that unless there is some political or military question involved the narrow gauge is the proper one for these lines, *Rendel* 5626. 5991.

Revenue accounts of the railways for each of the years, 1881-82, 1882-83, and 1883-84, *App.* 751-753 —Also for each half year from 31st December 1881 to 31st December 1883; *ib.* 762-765.

Statement showing for each year the mileage, average age, cost, and general results of working, *App.* 781.

Statistics of the cost of working under different heads, *App.* 798 *et seq*

Northern Bengal Railway. See *Bengal Northern Railway.*

Nowgong-Nagode-Sutna Railway. Length and cost of this project, as proposed by the Government of India to be left to private enterprise, *App.* 529.

O.

Opium Duty. Receipt of nearly 10,000,000 l. a year from the opium duty, *Sir J. Caird* 657.

Grounds for the statement that the Indian Government is not merely an administrator, but is in some sense a trader, great fluctuation in the opium department which affects materially the revenue of the Government, *Westland* 4776.

Orissa Great importance attached to a line for the protection of Orissa from the effects of famines which have been most disastrous in that district, suggested extensions so as to provide a line from Calcutta to Madras through the Orissa district, *Sir J. Caird* 403-406.

Almost complete isolation of Orissa during the late famine, protection given to this district by the construction of a tidal canal from the west bank of the Hoogly River *via* the Midnapur district, *Hunter* 7189 7231 —Sea communication with Orissa only at certain seasons of the year, during the fair monsoon; communication by canal also established as far as Midnapur, *Bullen-Smith* 2359-2361.

See also *Vizagapatam-Rampur Railway.*

Orissa and Behar Irrigation and Navigation Works Unsatisfactory results in the case of the Orissa Canal, though not guaranteed; compensation paid to the secretary and other officers of the company, *Strachey* 234-238.

Oudh and Rohilkund Railway. Failure, commercially, of the Oudh and Rohilkund Railway, *Conway-Gordon* 4493-4496 —Opinion that the district of Oudh is at the present time fairly served by railways, *ib.* 5397, 5398.

Revenue

Report, 1884—continued.

Oudh and Rohilkund Railway—continued.

Revenue accounts of the Oudh and Rohilkund line for each half-year from 31st December 1881 to 31st December 1883, *App.* 760, 761.

Statement showing for each year the mileage, average age, cost, and general results of working, *App.* 771.

Statistics of the cost of working under different heads, *App.* 798 *et seq.*

P.

Passenger Traffic. Explanation with regard to passenger traffic in India, that a heavy loss is made on the first class, no profit on the second, and all the profit on the third, *Treow* 1726-1731—Fifty-nine millions of passengers travelled on the railways in India during the past year, *Bythell* 2654.

Average traffic passing over each mile daily in 1882, distinguishing between passengers and goods, and between broad gauge lines and narrow gauge lines, *App.* 651, 652—Result that the average passenger traffic is 50 per cent. greater on broad gauge lines than on narrow, *ib.* 652.

Comparison between the East Indian, the Great Indian Peninsula, the Rajputana-Malwa, and the Bombay, Baroda, and Central Indian Railways in 1883, and in other years when the traffics on the other lines approximated to that of the Rajputana-Malwa in 1883, *App.* 653.

Abstract statistics of the cost of working passenger and other coaching traffic, on each railway in each half-year, from 31st December 1880 to 30th June 1883, *App.* 798-803—Cost of working coaching traffic, distinguishing between broad gauge and narrow gauge lines, *ib.* 803.

Abstract statistics of the carrying capacity of each line in respect of coaching traffic, for each half-year from 31st December 1880 to 30th June 1883, *App.* 810-815.

See also *Rates and Fares*

Patna and Gya Railway. Statement showing for each year, the mileage, average age, cost, and general results of working, *App.* 777.

Statistics of the cost of working under different heads, *App.* 798 *et seq.*

Peile, J. B. Minute by him in January 1884, as a member of the Famine Commission, relative to the protective character of certain lines, importance attached to their rapid construction, *App.* 580.

Penukonda District. Statement showing the area, population, and loss of population, during the famine in this district, *App.* 587.

Plate laying. In former years the whole of the plate-laying was done by Englishmen, whilst it is now done by native workmen, *Chapman* 860, 861.

Poonah-Belgaum Railway. See *Western Decca, &c.*

Poonah College. Information respecting the Engineers' College at Poonah; statement that many of the natives who were trained there are now holding responsible positions as executive engineers, and as contractors, *Cope* 1253, 1407-1409, 1506-1509.

Poores. See *Benares to Poores.*

Population. Mileage of railways in proportion to population in the principal countries of the world, fifty times less accommodation (as measured by population) in India than in Australia, *Sir J. Caird* 530.

Examination as to the population and produce of the districts through which the new lines advocated by witness would run, consideration of objections on certain points, *Sir J. Caird* 617-631—Increased facilities for dealing with famine in localities through which railways pass, though they may cause an increase of population to be protected, *ib.* 696-698.

Belief that there is substantial difference between a protective and a productive line in a populous province, explanation that the several famines occur in the most populous places, *Westland* 4886-4906.

Contention that although railways do not necessarily increase the population of the district through which they pass, they tend to do so, instances of the effects of the introduction of railways upon the population of certain districts, *Hunter* 7160, 7306-7308, 7422-7424.

Sundry details upon the subject of population, &c. in the case of various lines advocated by the Provincial Governments and the Government of India, at an estimated expenditure of 28,262,450 *l.*, *App.* 853 *et seq.*

Report, 1884—continued.

Population—continued

Value of the railways in facilitating immigration from crowded districts into others sparsely populated, *Rep* viii.

See also *Famines, and Famine Lists*

Prices Effect of railways to equalise prices in regard to localities and to render the variations less from year to year, *Hunter* p164: 7170.

Reference to certain evidence in favour of railway extension with a view to the development of the internal trade of India and to the equalisation of prices, *Rep* vii

See also *Wheat*.

PRIVATE ENTERPRISE:

1. *Considerations generally as to the Question of Railway Extension by means of Private Companies*
2. *Question of Guarantees in connection with Private Enterprise*
3. *Official Papers and Correspondence as to the Extent to which Operations should be entrusted to Private Companies.*
4. *Conclusions and Recommendations of the Committee*

1 *Considerations generally as to the Question of Railway Extension by means of Private Companies:*

Approval of railway construction by private companies, but without guarantee, *Strachey* 20-22 31—Question considered as to the relative advantages and disadvantages of the action of companies, balance of advantages on the whole, *ib* 55-75. 92-94. 253-264. 372-374—Approval of private enterprise pure and simple; great improbability, however, of this being sufficient in view of the loss on exchange, *ib*. 1139-1141 1196.

Expediency of considering the proposals of private companies for the construction of railways conditionally on an efficient and active Government control, *Wood* 2279, 2280. 2286, 2287

Statement as to the principles which have guided the Government of India respecting the character of the railways to be taken up by themselves, and of those to be constructed by private companies, proposals made by private contractors to make certain lines either with or without State aid, and to carry them on when completed, *Conway-Gordon* 4082-4101. 4116-4119

Doubtful expediency of giving over to private companies the lines that are likely to pay, while the Government retain only those that are not likely to be remunerative; belief that such a course is apt to discredit Government management, *Conway-Gordon* 4305.

Grounds for considering it expedient that the Nagpur and Seeterampur, and one or two other railways should be made by companies, belief that there are on the other hand considerable advantage in the working of the lines by Government instead of by companies, *Conway-Gordon* 4346-4865. 4371-4394. 4416-4420.

Disapproval on the part of the Secretary of State of a proposal made by the Government of India that the public should be informed as to the extent to which private enterprise would be encouraged, *Conway-Gordon* 4466.

Willingness on the part of the Government to give all facilities, short of financial aid, to private enterprise to construct railways, *Westland* 4757—Proposal by merchants of Bengal to undertake some railways, *ib* 4760-4763.

Information respecting the lines proposed to be taken up by the Government, indication that private enterprise is not prepared without a guarantee from Government to enter upon railway construction, *Westland* 4845-4854. 4879-4915 4920-4937.

Land given by the Government to private companies free of charge, in addition to detailed information respecting the districts through which the lines are to be run, actual expenses incurred on the surveys not given free by the Government, *Conway-Gordon* 5495-5498.

Desire of Lord Hartington, when Secretary of State for India, to encourage private enterprise and construction by companies; facilities afforded by the Government with this object, *Waterfield* 6064, 6065 6071-6084—Numerous schemes put forward by private companies as the result of the agreement made with the Bengal Central Company, *ib*. 6074, 6075.

Suggestions generally as to the best course to be adopted for encouraging private enterprise for the construction of new lines, great importance of a comprehensive railway Act of the Indian legislature, similar to the "Companies Clauses Consolidation Act," *Danvers* 6878 6880-6882 6884-6886. 7080-7103.

Considerations as to the probability of private companies coming forward to undertake the construction of the proposed lines; if companies are not found, the Government will not allow the question of railway extension to collapse, *Hunter* 7155. 7317-7323. 7378-7388.

Report, 1884.—continued.

PRIVATE ENTERPRISE—continued.

2. Question of Guarantees in connection with Private Enterprise :

Effect of continuing the guarantee system, that no lines will be undertaken by private enterprise without guarantees; single instance of the latter, *Strachey* 22, 23.—Explanation in approval of a suggestion in the Report of the Famine Commission that the advantages of private enterprise may be obtained by means of some substitute for the original form of guarantee, which shall give Government a more reasonable share of the profits, *ib.* 38-54.

Suggestion that the necessary extension may be partly effected through private companies who should provide the capital, receiving a moderate rate of interest and a portion of the receipts, the expenditure being under the control of the Government and the lines being worked by the companies, *Strachey* 1102, 1103 1109 *et seq.*

Very indifferent success which has attended the plan of raising capital through private companies without the same guarantee as in the case of the older lines, *Sir J. Caird*, 390, 391.—Discouragement of English capitalists from investing in new enterprises, as some existing lines have proved unremunerative whilst the best routes are already taken by other lines, *ib.* 448-450. 543-545.

Grounds for the opinion that if it be decided to extend railways in India, the Government should not incur any risk whatever in the matter, steps which should be taken to induce the public to come forward to make the proposed lines, *Chapman* 744-746 786-800 810-820.—Anticipation that the time is not far off when private English enterprise will freely undertake Indian railways without State aid in any form, *ib.* 882-886.

Suggestions as to the mode which should be adopted by the Government to induce private companies to take up the construction of branches, impossibility of laying down any hard-and-fast lines in regard to such construction, *Trevor* 1585-1587.—Admission that if the Indian Government embarked very largely in the construction of non-remunerative lines it would materially affect the construction of remunerative lines by private companies, *ib.* 1799, 1800.

Grounds for considering it expedient to carry out railway schemes by means of private companies with modified guarantees from the Government; very great difficulty which would arise in organising a staff of engineers if the Government took the construction upon themselves, *Lord* 2480-2483 2501, 2502. 2537-2543

Conclusion that private unaided enterprise is not likely in India to do anything in the way of extending the railway system; expediency for the Government to give a permanent guarantee to private companies who undertake the works, *Hardie* 2823-2826 2831-2833 2927-2932 2939-2942.—Opinion that railways cannot be extensively carried out in the country without State assistance, *Birkmyre* 3339, 3340.

Statement that as regards the lines left to be undertaken by unassisted private enterprise the Government will merely grant the load free of cost, *Conway-Gordon* 3499-3501.—Contention that the whole history of Indian railways is one long unsuccessful attempt to get the lines constructed without a State guarantee, *ib.* 4307-4309

Further examination as to the reluctance of private companies to undertake the construction of railways in India without State aid, the grounds for this unwillingness are partly the mode in which the accounts are kept and the want of information as to the terms granted by the Government, *Conway-Gordon* 4465-4468. 4580, 4581. 4590, 4591. 4627-4643 4697

Further examination as to the practical necessity of a Government guarantee to induce private companies to take up the lines; preference, however, for pure private enterprise and after that the Bengal Central terms, *Conway-Gordon* 5476-5483. 5524-5526. 5534, 5535 5552 5556. 5584-5596.

Willingness of the Indian Government to permit companies to come and take up any railways they like so long as a guarantee is not required, *Westland* 4871-4873.

Anticipation that the time is not far distant when railways will be made in India without the necessity of a guarantee, belief that many lines might be built without guarantee at the present time if companies were allowed to construct branches, *Ashburner* 6360-6363. 6380-6385.

Opinion that it would not be possible to find companies to continue to make railways on Bengal Central terms, *Robertson* 6560-6563

Suggestion that the terms of the Bengal Central Railway contract should be given in the case of lines which are likely to pay, *Danvers* 6874. 7082, 7083 7085-7090.—Belief that a time will come when railway enterprise will be attracted to India from England without the aid and support of Government, *ib.* 6879. 7089

3 Official Papers and Correspondence as to the Extent to which Operations should be entrusted to Private Companies :

Despatch from the Secretary of State, dated 6th January 1881, conclusion thereon that every encouragement should be given to private individuals to undertake the construction of railways, if possible, without guarantee or subsidy, *App.* 488-492.

PRIVATE ENTERPRISE—continued.**3. Official Papers and Correspondence as to the Extent, &c.**—continued.

Despatch from the Secretary of State, dated 8th December 1881; conclusion expressed therein that private enterprise is not a suitable agency for unremunerative lines; *App. 507-509*—Representations by the Secretary of State in December 1881 as to the expediency of encouraging private enterprise for certain lines, *ib. 508*.

Letter from the Government of India in January 1883, submitting various proposals and schemes involving construction by means of private agency, *App. 509-523*.

Particulars as to the actual extent and form in which private enterprise is proposed on the part of the Government of India in letter of 23rd January 1883, *App. 509-523*.

List of lines, the capital for which it is proposed by the Government of India in January 1883 should be raised by private companies, under the limited guarantee system, *App. 527. 570. 576*.

Schedule of railways proposed by the Government of India in January 1883 to be left to private enterprise; estimate of cost in each case, *App. 529-531*—Total of 3,497 miles, at an estimated cost of 24,344,000 *l.*, proposed to be carried out by private enterprise, *ib. 531*.

Revised list of lines proposed to be left to private enterprise, the total mileage being 3,432½, and the total estimated cost 24,288,000 *l.*, *App. 572, 573*.

4. Conclusions and Recommendations of the Committee

Policy of the Government of India to leave to private enterprise those lines which are commercially most attractive, *Rep. v.*

Concurrence of evidence as to the expediency of the agency of companies simultaneously with construction by the State, *Rep. vii.*

Reference to the extension scheme of the Government of India as largely dependent on certain lines, to which they attach the greatest importance, being taken up by companies; considerable doubt on this point, *Rep. ix.*

Value of the emulation between *quasi private enterprise* and Government working, as tending to promote economical construction and management, *Rep. x*—Prospect of new railways being, in course of time, carried out by unassisted private enterprise, *ib.*—Expediency of this probability being kept in view in all contracts made by the State, *ib.*

Three different plans on which companies have lately undertaken railways in India, explanation of the terms under each plan, *Rep. x*—Different circumstances under which these several plans are, in turn, suitable, *ib. xi.*

Conclusion that simplicity of terms is of great importance in inducing companies to make new lines, *Rep. xi.*

See also *Administration and Management. Bengal Central Railway Bengal Capital (Railway Extension). Construction and Working. Expenditure. Extension of Railways. Financial Results of Railways. Gauge. Guarantees, and Guaranteed Railways. Productive Lines. Southern Mahratta Company.*

PRODUCTIVE LINES :

1. *Distinction drawn by the Secretary of State for India between Productive and Protective Lines, Exceptions taken thereto.*
2. *Prospect of New Lines, and of Indian Railways generally, becoming Productive.*
3. *Productive Lines proposed by the Government of India.*
4. *Expediency of the best paying Lines being first undertaken.*
5. *Financial Statistics relative to Productive Lines.*

1. *Distinction drawn by the Secretary of State for India between Productive and Protective Lines; Exceptions taken thereto.*

Sanction given by the Secretary of State to the raising of borrowed money for productive lines, whilst it was prohibited in the case of protective lines, exceptions taken to this distinction, *Strachey 6-8. 179*—Objection on the ground that the distinction in question is based on mere estimates of cost and receipts, tendency to unduly favourable estimates in the case of productive lines, *ib. 7, 8*.

Grounds for the exception taken by witness to the distinction drawn in the Despatch of the Government of India of 23rd January 1883, between productive and protective lines, *Sir J. Caird 384-388*

Desire on the part of the Indian Government that the restrictions imposed by the Secretary of State as to the expenditure of borrowed money upon railways, unless they produce four per cent. within five years, should be relaxed; grounds for considering relaxation expedient, *Conway-Gordon 3537-3539; 3593-3607 3627-3631.*

Contention

Report, 1884—continued.

PRODUCTIVE LINES—continued.1. *Distinction drawn by the Secretary of State for India, &c.*—continued.

Contention that if the conditions as to productive railways, as laid down by the Secretary of State, had been in force, the East Indian Railway, which is a most successful financial work, could not have been constructed, belief that such conditions would also have excluded the construction of every other railway in India, *Conway-Gordon* 3538.

Strong desire of the Government of India that the restriction in regard to the definition of productive works should be removed, expediency of permitting Government to borrow money for the construction of works which may not earn as much as four per cent., *Conway-Gordon* 4075, 4076.

Explanation with further reference to the restrictions imposed by the Secretary of State in regard to the character of the lines to be constructed, and the amount of interest to be earned, limits also imposed on the Indian Government as regards the amounts to be borrowed for public works, *Conway-Gordon* 4027, 4028, 4075, 4076 4202-4231-4288.

Impossibility of applying a hard-and-fast rule to all railways as to the particular stage at which they become productive, *Conway-Gordon* 4270-4274—Expediency of removing entirely the distinction between protective and productive lines, argument that each line should be dealt with entirely on its merits, *ib.* 5419-5423.

Action taken in 1881 by the Secretary of State to define the works which were to be considered productive, statistics showing the financial results of the productive works so defined, *Waterfield* 6064-6070. 6112.

Despatch from the Secretary of State to the Government of India, dated 6th January 1881, summarising orders already laid down regarding productive works, and approved by the Select Committee of 1878-79; definition of productive works, and of the principles by which expenditure should be regulated, *App.* 487-492.

Rule laid down by the Secretary of State as to the conditions under which any railway should be considered to be a productive work, *Rep.* iv.

Reference by the Committee to the exception taken to the rigid distinction maintained as between productive and protective lines; conclusion that this distinction cannot be maintained, *Rep.* ix.

2. *Prospect of New Lines, and of Indian Railways generally, becoming Productive:*

Good prospect of new lines being remunerative, though some years are necessary for their profitable development, *Strachey* 322-325—Prospect of ultimate remuneration wherever the soil is cultivated and there is much produce as well as passenger traffic to be carried, *Str. J. Caird* 427-430.

Statement as to the lines most necessary to be constructed and most likely to be taken up by private enterprise, opinion that there are not many productive lines which have not already been taken up, *Trevor* 1583, 1584, 1613-1619, 1635-1649 1800.

Decided opinion that at the present time there is ample scope for the construction of remunerative lines, *Hardie* 2940.

Belief that none of the lines recommended by the Government of India are unlikely to pay if economically managed, *Conway-Gordon* 3638-3640—Differences of opinion on the part of officials with regard to certain lines as to whether they will be productive or not, *ib.* 5369, 5370.

Concentrated efforts of the Government to push on protective lines with the belief that they will be to a large extent productive, technical meaning of "productive" line that it will pay four percent within five years after opening, *Westland* 4753-4756—Witness submits that there is no doubt but that nearly every mile of railway in any part of India will pay ultimately, *ib.* 4755, 4756.

Forecast for ten years prepared by witness showing the financial effect of the whole of the proposals, contention that the operations of the first five years are not likely to throw any burdens upon future years, *Westland* 4778, 5004—Statement that the figures prepared by witness represent the question in the most unfavourable light so as to make the estimate perfectly safe, *ib.* 4779-4781 5008, 5009—Admission that many of the railways charged to capital are not productive in the strict sense of their producing four per cent. within five years, they are, however, productive otherwise than in this restricted sense, *ib.* 5262-5264.

Undoubted belief that railways, if constructed economically, at about 4,500 l a mile on the narrow-gauge, will in future be a source of large revenue to the country, *Rendel* 5660-5661.

3. *Productive Lines proposed by the Government of India*

Information as to the principles upon which the present proposals of the Indian Government are made, as regards the construction of new lines, stringent rules in force to secure investments in reproductive works producing at least as much as the interest paid

Report, 1884—continued.

PRODUCTIVE LINES—continued.**3. Productive Lines proposed by the Government of India**—continued.

on the amount borrowed, *Conway-Gordon* 3528-3536—Practice of the Government during the past few years to invest largely on railway and other reproductive works, which amply cover the amounts borrowed for other purposes, *ib* 3532-3536

List of productive lines, as proposed in letter from Government of India in January 1883, *App* 524-526.

List of railways proposed by the Government of India in January 1883, to be left entirely to private enterprise, as being, productive, or protective and productive, *App* 529-531.

Documentary evidence and extracts from official correspondence submitted by Major Conway-Gordon respecting various productive lines advocated by the Provincial Governments of the Government of India, the total expenditure being estimated at 28,262,450*l.*, *App* 553 *et seq.*

4. Expediency of the best paying Lines being first undertaken

Evidence strongly in favour of the construction, in the first instance, of productive line through populous districts, before unproductive lines are undertaken; grounds for concluding that this is the most effectual plan for saving lives in time of famine, *Sir J. Caird* 384-388, 417-430, 503, 504.

Conclusion further expressed that Government should, for some years to come, confine their financial risk to construction in the more populous and productive districts, reluctance of the public to take the risk, *Sir J. Caird* 580-584.

Decided opinion that no line should be constructed which within a reasonable period would not pay four per cent upon its cost; exception to this rule in regard to strategical and protective lines undertaken by the Government upon their general credit, *Chapman* 797-800.

Great importance that the money to be expended should be laid out on the best paying lines, and that the first to be constructed should be those that were absolutely certain to pay, *Conway-Gordon* 3553, 3558, 3559.

5. Financial Statistics relative to Productive Lines

Statistics showing in aggregate sums the total cost, gross receipts, working expenses, net revenue, &c, *App* 622.

Amount of debt in each year since 1870 on account of productive public works, *App* 623.

Abstract statement of expenditure in each year since 1867-68, *App* 714-718

Detailed statement showing the interest on debt incurred for productive public works in each year since 1867-68, *App* 720-721

Statement of expenditure on productive public works on capital account in each year since 1867-68, *App* 724-727

Statement of revenue from productive public works since 1867-68, *App* 728-733.

Statistics respecting different protective lines, showing the length, total estimated cost, outlay to end of 1882-83, probable outlay in 1883-84, and the balance needed to complete, *App* 790, 791.

See also *Chattisgarh, District. Expenditure (Railways). Extension of Railways. Financial Results of Railways Gauge Guaranteed Railways Guarantees, and Guaranteed Railways. Loans. Private Enterprise. Protective Lines. Wheat.*

Profits from Railways. Statement showing the per-centage on capital outlay of net earnings of different railways five years after their completion; also in 1882, *App* 694.

See also *Financial Results of Railways.*

Prome-Alanmyo Railway Particulars respecting this line, as proposed by the Government of India in January 1883, *App* 524, 533.

Documentary evidence submitted by Major Conway-Gordon showing the views of the Government of India and of the Madras Government in favour of the construction of this line, approval on the part of the Secretary of State, *App* 910, 911, 920.

PROTECTIVE LINES

1. Considerations as to the Expediency of pushing on Protective Lines, Objection to the Limitation laid down by the Secretary of State in the matter.
2. View of the Government of India in favour of State Construction being limited to Unproductive Lines.
3. Details respecting the Protective Lines proposed by the Government of India
4. Expenditure.
5. Conclusions of the Committee.

1. Considerations

Report, 1884—continued.

PROTECTIVE LINES—continued

1. *Considerations as to the Expediency of pushing on Protective Lines, Objection to the Limitation laid down by the Secretary of State in the matter*

Gradual increase of the repressive action of the Secretary of State in Council, comment more especially upon the additional limitations imposed by the Despatch of Lord Hartington in June 1881, and upon the arbitrary distinction therein drawn between productive and protective lines, *Strachey* 6-8—Effect of the foregoing distinction that it prevented the construction of those lines which, as regards protection against famine, were the most needed, *ib* 7.

Further opinion that the arbitrary distinction drawn between protective and productive lines should be abolished, *Strachey* 179

Approval of the construction of the protective lines which have been recommended by the Famine Commission, *Lord* 2477.

Explanation that as far as railways are concerned it is the desire of the Government of India to abolish the existing distinction between protective and productive works; expediency of leaving the selection of non-paying works to the direction of the Government, under the control of the Secretary of State, *Conway-Gordon* 4158-4173 4261-4267 4277-4287 4291—Estimate that the lines proposed will pay from two to three per cent above their working expenses, besides being useful for protection against famine, *ib* 4399, 4400.

Statement as to the particular lines which are proposed by the Government as protective against famine, different districts in need of protection, *Westland* 4750, 4751—Grounds for the opinion that at the present time protective lines should be pushed in preference to commercial lines; in past times the Government largely took up those lines which were supposed to be purely productive, *ib* 4879-4927. 5019-5021.

Decided opinion that the distinction between protective and productive lines is not a clear one, grounds for this view, *Conway-Gordon* 5367-5369. 5419-5423 5498-5504. 5597-5608 5614-5619—Belief that the construction of protective lines would have no tendency to induce the natives to rely unduly on the assistance of the Government in time of famine, the tendency, on the contrary, would be to encourage a greater extent of cultivation, *ib* 5424-5427. 5420-5431. 5557-5559.

Possibility of suggesting lines with better prospects of paying, but which would not protect the districts which require protection; view of the Government in their proposals that protection is to be first considered, *Hunter* 7329-7334.

2. *View of the Government of India in favour of State Construction being limited to Unproductive Lines*

Letter from the Government of India in January 1883, submitting amongst various definite proposals that the Government should only undertake the construction of lines which from their unprofitable character cannot be made by private agencies, *App.* 509-523

3. *Details respecting the Protective Lines proposed by the Government of India:*

List of railways submitted by the Government of India in January 1883 as indispensable for protective or other urgent purposes, to be completed or made by the State or other agency on its behalf, estimate of the cost in each case, and of the net revenue, *App* 524-526 532, 533

List of lines proposed by the Government of India in January 1883 to be left entirely to private enterprise, as being productive, or protective and productive, *App.* 529-531.

Revised list of lines indispensable for protective or other urgent purposes, to be completed or made by the State, or other agency on its behalf, *App.* 568-570.

Explanations in detail by Mr. Conway-Gordon in connection with appendices showing the lines already specifically sanctioned by the Secretary of State, the lines either directly or indirectly approved by him, and the lines which have not as yet received either his sanction or approval, *App* 853-920

4. *Expenditure*

Amount of expenditure on protective railways and irrigation works in each year since 1881-82, *App.* 693

Statistics respective different protective lines, showing the length, total estimated cost, outlay to end of 1882-83, probable outlay in 1883-84, and the balance needed to complete, *App* 790, 791

5. *Conclusions of the Committee*

Summary of the proposals of the Government of India as to the number, extent, and cost of the lines which they consider to be indispensable for protection against famine, or for other urgent purposes, *Rep* v, vi

Report, 1884—continued.

PROTECTIVE LINES—continued.5 *Conclusions of the Committee*—continued.

Opinion of the Committee that the technical distinction which has been hitherto made between protective and productive lines cannot be maintained, *Rep.* xi.—Disapproval of the entire removal of the check upon the construction of unemulative lines, *ib.*

Recommendation that railways needed for protection from famine or for the development of the country, be made as required, whether they be technically considered protective or productive, *Rep.* xi.

See also *Bundelkhand Chattisgarh District. Expenditure. Extension of Railways. Famines, and Famine Lines. Financial Condition of India. Gauge. Loans. Military Lines. Orissa. Productive Lines. State Railways.*

PROVINCIAL GOVERNMENTS:

Conclusion as to the necessity of decentralising the construction and management, and of devolving the responsibility generally upon the Provincial Governments, careful consideration necessary in order to mature a scheme for this purpose, *Strachey* 32-37. 90, 91.

Explanation that witness does not approve, at present, of the raising of loans by the Provincial Governments for the construction of railways, though the administration might be placed in their hands, together with the financial responsibility for working the lines, *Strachey* 265, 266.

Advantages of construction and control by the Provincial Governments, *Sir J. Caird* 393-398—Advocacy of administration by the Local Governments, aided by able officers, but without abolishing the Central Public Works Department, *ib.* 393-398. 614-616 634.

Expediency of giving to Local Governments greater latitude as regards granting guarantees from provincial revenues, argument that if Local Governments had this power they could more successfully resist the frittering away of local funds upon insignificant objects, *Ashburner* 6365. 6372-6379. 6451, 6452. 6493-6518.

Information generally respecting the proposals made by the Government of Bombay that the Local Governments should be given power to pledge the provincial revenues for railways, desirability of extending the present system of local cess by means of which the works would be carried out, *Ashburner* 6493-6518.

Examination respecting the extent to which it would be judicious that a Provincial Government should have power to construct local railways out of their own funds; suggestion as to the method by which this system could be extended, *Westland* 7107-7133—General proviso that Provincial Governments shall meet out of their revenues any deficit in respect of the working returns of the lines, *ib.* 7121, 7122

Various lines the capital for which is proposed to be raised by the Government of India, the interest to be paid by the Provincial Governments, *App.* 525. 569 576.

Explanation submitted by Mr. Westland in connection with provincial deficits and surpluses in each year from 1878-79 to 1883-84, *App* 629

Documentary evidence, and extracts from official correspondence (submitted by Major Conway-Gordon), respecting various lines advocated by the Provincial Governments and the Government of India, the total expenditure being estimated at 28,262,450 *l.*, *App* 853 *et seq*

PUBLIC WORKS DEPARTMENT:

Explanation that in advocating administration and management by each Province, witness does not imply that the Public Works Department at Calcutta should be abolished, *Sir J. Caird* 614-616.

Inexpediency of enlarging to any great extent the Public Works Establishment, necessity in such an event of pensioning off, after a few years, a large number of engineers, *Coke* 1283. 1406. 1425, 1426

Opinion that there is too much "red tape" in the public works system under the Government, *Glover* 1882—Belief that the system of obstruction by the executive officers is almost general on the State lines, *ib.* 1885-1887—Instance in which a serious disagreement arose in relation to a defective weighing machine, the cost of the repair of which was charged to witness by the Government, explanation that this friction was caused by the action of an inexperienced engineer, *ib.* 2033-2035 2107-2110. 2143, 2144.

Policy adopted for many years by the Government of expending large sums annually on the material development of the country, *Conway-Gordon* 3510—Statement that the Public Works Department has given the benefits of improved communication and all the requirements of modern progress at an annual charge of 3 $\frac{1}{2}$ *d.* per head of the whole vast population, *ib.* 3511, 3512.

Anticipation

PUBLIC WORKS DEPARTMENT—continued.

Anticipation that very soon the revenue produced from railways and irrigation works will enable the Government of India to carry on the whole Public Works business at an insignificant charge to the taxpayer, net charge to the taxpayer decreasing at the present time, *Conway-Gordon* 3513 — Explanation that there is now a smaller proportion of annual expenditure upon maintenance and repairs by the Public Works Department, and a larger expenditure upon new works for the material improvement of the country, *ib* 3514.

Entire absence of any decision on the part of the Government that the expenditure of the Public Works Department should be removed from the control either of the Secretary of State or of that of the Financial Department of the Government of India, *Conway-Gordon* 4139, 4140, 4152.

Desire on the part of Mr. Hope (Public Works Minister) that the same amount of stability should be given to the department of Public Works as is now given to the Local Governments, *Hunter* 7376

Value of construction and working by companies as not necessarily involving any increase of the staff of the Department, *Rep x*—Limitation of State operations according to the strength of the Public Works Department, the permanent staff of which it is not desirable to increase, *ib*

See also *Administration and Management. Construction and Working. Cost of Construction. Engineers. State Railways.*

PUBLIC WORKS (REVENUE AND EXPENDITURE):

Statement that in the year 1883 there was capital expenditure upon ordinary public works of revenue to the amount of nearly four millions, *Westland* 5048, 5049, 5254-5261 — Opinion that it is not advisable that the Government should at present retrench its ordinary public works expenditure so as to divert some of it towards productive purposes, *ib* 5104, 5105—The expenditure upon works and modern improvements amounts to about seven per cent upon the gross revenue, *ib* 5259, 5260.

Examination as to the origin and progress of the policy of constructing large public works in India by direct agency of the State by means of borrowed money, *Waterfield* 6030 *et seq.*—Proposal in 1866 that extraordinary works should be separated from ordinary expenditure and not included in the figures upon which the annual surplus is calculated, proceedings consequent thereupon, *ib* 6030-6045 6297-6309.

Large scheme proposed by Lord Mayo's Government in 1869 for the extension of public works by loans, amounting to six or eight millions a year for the next ten years, disagreement with this scheme on the part of the Home Government, *Waterfield* 6033, 6034—Comparison of the outlay now proposed on public works with the actual outlay in past years, *ib* 6087

Account containing certain details of receipts and expenditure in respect of different classes of public works in each year from 1878-79 to 1882-83, *App.* 542, 543.

Amount of capital outlay in each year on railways and other works of a public character, *App.* 698, 699.

Abstract statement of public works expenditure in each year since 1867-68, *App.* 714, 715.

Statement of expenditure on Productive Public Works on capital account in each year since 1867-68; *App.* 724-727

Particulars of Public Works revenue in each year from 1867-68; *App.* 728-733.

Abstract of Public Works operations in each year since 1867-68; *App.* 734, 735.

Abstract of revenue or receipts in each year, *App.* 736, 737

See also *Expenditure (Railways) Financial Results of Railways*

Publicity. Recommendation by the Committee that all possible publicity be given both in England and in India to the projects which the Government wish to be undertaken by companies, *Rep.* xi.

Recommendation also that the accounts of the financial results of the railways should be kept in such a manner, and so published as to be easily available to and understood by the investing public, *Rep.* xi.

Punjab Statement that there are 9,000,000 acres of land in the Punjab which would probably be brought into cultivation if railways were made; expediency of a large extension being carried out, *Bythell* 2607-2610, 2614, 2704-2710.

Particulars respecting the several lines proposed by the Government of India in January 1883, *App.* 524-526, 529.

See also *Punjab Northern Railway Umballa to Pattala.*

Punjab Northern Railway. Statement showing the expenditure and estimated expenditure in respect of the Punjab Northern State Railway since 1879-80; *App.* 723.

Report, 1884—continued.

Punjab Northern Railway—continued.

Revenue accounts for each of the years 1881-82, 1882-83, and 1883-84; *App.* 751-753—Administrative transactions for the above years, *ib.* 754-756, 758.

Statement showing for each year the mileage, average age, cost, and general results of working, *App.* 779.

Statistics of the cost of working under different heads, *App.* 798 *et seq*

Puranpur-Lucknow Railway Length and cost of this project, as proposed by the Government of India to be left to private enterprise, *App.* 529

PURCHASE OF UNDERTAKINGS:

Opinion that Government should be able to acquire the railways at a rate not exceeding the original amount of capital, *Strachey* 22—Expediency of a reasonable power in Government to come in and buy up the lines made by private enterprise, a fair value being given for the property, *ib.* 1192.

Contention that the right of the Government to purchase the railways should be reserved whether they are or are not under a guarantee, *Loks* 1364-1367—Grounds for advocating the eventual purchase of the railways by the State after a term of years, statement that the value of Indian railway property is increasing every year, and that in the future higher prices must be paid for their acquisition, *Trevor* 1588, 1692, 1693, 1748-1758, 1763-1771.

Expediency that in all arrangements with private companies there should be a provision that the Government are eventually to become the owners of the railways, grounds for this opinion, *Bullen-Smith* 2304, 2305, 2311, 2369-2372.

Importance of a purchase clause in the contracts with guaranteed companies which should give the Government power to take over the line on repaying the capital expenditure, *Conway-Gordon* 4310, 4311—Possibility in the case of new lines, where there is a contract with the Government for purchase, that the companies may wilfully default, and so force the Government to take over unpaying concerns; examples of this course in the Orissa Canal Company, *ib.* 4401-4407.

Opinion that in every case of a permanent guarantee there should be a provision for compulsory purchase by the Government at a price not above a certain maximum, *Westland* 4768-4770—Approval of the Government reserving under certain contracts the right to purchase the lines after twenty-five or forty-five years; notice of one year given to the companies in such cases, *Robertson* 6558, 6655—Satisfaction expressed with the terms of purchase in the case of the Bengal Central Company, *ib.* 6558

Desirability in future contracts that the present terms of purchase by Government should be revised, *Danvers* 6882

Suggestion by the Committee that in future contracts the option of demanding the repayment of the capital of the company by one year's notice should not be unconditionally given *Rep.* xi.

See also *East Indian Railway*

Quetta Railway. Approval of money being borrowed for loans needed for military purposes, such as the line to Quetta, though not likely to be productive, *Strachey* 18

Recent sanction of a line from Dadur to Quetta, *Westland* 4932—Doubt as to the mode proposed by Government for meeting the estimated expenditure of 2,000,000 £. on the Quetta line, *ib.* 5266-5268.

Opinion that the expenditure upon the Quetta Railway is large enough to take the whole of the surplus as provided in the Budget, *Waterfield* 6295.

Grounds for advocating the extension of the Sibi line of railway to Quetta, and eventually to the frontier; that is, on commercial as well as political grounds, *Ashburner* 6336, 6415, 6416—Exceeding importance of such extension in view of the recent advance of Russia in Central Asia, *ib.* 6336—Belief that this line would eventually carry sufficient paying traffic from Afghanistan and from Central Asia, *ib.* 6415-6418.

Reference by the Committee to the decision in 1883 to complete the railway to Quetta, this involving an expenditure of about 2,000,000 £ in four years, *Rep.* xi.

R

Rails and Sleepers Information respecting the relative cost of rails per mile for the broad and narrow gauge; difficulty which would be experienced in placing a third rail on broad gauge lines because of the special sleepers required, *Glover* 2178-2190

Increased weight of rails used on the Indian lines at the present time, chiefly on account of the reduced cost, iron rails on the Rajpootana Railway cost 14 $\frac{1}{2}$ a ton in 1873, whereas steel rails can be now obtained for 5 $\frac{1}{2}$ a ton, *Rendel* 5626, 5627*. 5686-5688.

Considerable effect which the weight of rails has upon the relative cost of broad and narrow gauge, *Conway-Gordon* 6789-6796 6810-6814 — Diminution of one-half in the cost of iron rails during the past three years, *ib.* 6806, 6807.

Concurrence of evidence as to the cheapness of the materials used in construction, and as to the present being a favourable time for more rapid extension, *Rep.* viii.

Railway Cess. Approval, under certain limitations, of power in the localities or the Provincial Governments to levy a railway cess in order to make up the required rate of interest on new lines, that is, in the case of productive districts, *Strachey* 187-196 272-274 — Doubt as to the expediency of a system of local railway cess in aid of interest on protective lines, *ib.* 192-196. *

Railway Commission Advocacy of the appointment of a small Railway Commission as a tribunal for the settlement of disputes regarding rates and other matters, *Damers* 6878. 6917-6922.—See also *Rates and Fares*, 2

Rajput Vizagapatam. See *Vizagapatam-Rajput Railway*

RAJPOOTANA-MALWA RAILWAY

Opinion that the Rajpootana line, between Bombay and Delhi, should be converted to the broad gauge, *Coke* 1295-1296 — Extraordinary development of the Rajpootana country caused by the making of the railway through it, *Glover* 2074-2077

Belief that the Rajpootana Malwa line will eventually have to be taken up and relaid on the broad gauge, *Graham* 2738 — Additional competition to which the Great Indian Peninsula Company will be exposed from the Rajpootana, Bombay, and Baroda line, *Crawford* 3678, 3679.

Important fact that had the Rajpootana line been in the hands of a private company it would have been impossible to stimulate the export trade in wheat which was effected by the reduction of the rates on that line during last year, *Conway-Gordon* 4304 — Large increase in the weights and size of the engines and wagons on the line since it was first opened, *ib.* 4334.

Construction of the Rajpootana line to Bombay on the narrow gauge universally acknowledged to be a great mistake, opinion that to alter the gauge would be a very expensive matter, *Conway-Gordon* 4423-4425 4441-4445 — Information respecting the traffic and the cost of transhipment, *ib.* 4650-4693 — Success of the Rajpootana line, though this was doubted at first, *ib.* 5540

Approximation of the traffic on the Rajpootana railway at the present time to that of the East Indian in the year 1872, *Rendel* 5624 — Opinion that if the Rajpootana line were doubled to the same extent as the East Indian, the traffic might be trebled without the smallest difficulty, *ib.* 5624-5910 5953-5659.

Large increase required in the weight of the engines on the Rajpootana line, expediency of drafting all the existing engines on to lines where the traffic is limited and replacing them with heavier, *Rendel* 5624. 5876, 5877 — The third-class carriages on the railway are better than the average third-class carriages, *ib.* 5825

Results of the working of the goods traffic of the Rajpootana-Malwa Metre Gauge line compared with that of the Bombay and Baroda and other broad gauge lines; disadvantages of the former, *App.* 603-605.

Comparison between the East Indian, the Great Indian Peninsula, the Rajpootana-Malwa, and the Bombay, Baroda, and Central Indian Railways in 1883, and in other years when the traffics on the other lines approximated to that of the Rajpootana-Malwa in 1883, *App.* 653

Statistics of the cost of working of the Rajpootana line under different heads, *App.* 798. *et seq.*

Revenue accounts for each of the years 1881-82, 1882-83, and 1883-84; *App.* 751-753 — Administrative transactions for the above years, *ib.* 755 757 759.

Revenue accounts for each half year from 31st December 1881 to 31st December 1883, *App.* 762-765.

Report, 1884—continued.

RAJPOOTANA-MALWA RAILWAY—continued.

Statement showing for each year the mileage, average age, cost, and general results of working, *App.* 777, 778.

Ranaghat-Bhuywanga Railway. Particulars respecting this line, as proposed by the Government of India in letter of 23rd January 1883, *App.* 513, 514.

Documentary evidence submitted by Major Conway-Gordon respecting this railway, as proposed by the Government of India, its advantages, estimated cost, &c.; sanction given by the Secretary of State, *App.* 917-919

Rangoon and Irrawaddy Valley Railway. Revenue accounts for each of the years 1881-82, 1882-83, and 1883-84, *App.* 751-753—Administrative transactions for the above years, *ib.* 755-757-759.

Revenue accounts for each half-year from 31st December 1881 to 31st December 1883, *App.* 762-765.

Statement showing for each year the mileage, average age, cost, and general results of working, *App.* 779

Statistics of the cost of working, under different heads, *App.* 798 *et seq.*

Rangoon-Tounglo (Sittang Valley) Railway. Documentary evidence submitted by Major Conway-Gordon respecting this line, as proposed by the Government of India, its advantages, estimated cost, &c.; sanction given by the Secretary of State, *App.* 911-913-919.

Rapid Construction of Railways. See *Extension of Railways.* *Famines and Famine Lines.*

RATES AND FARES:

1. *Concurrence of Evidence in favour of Government Revision and Control; Recommendation to this effect by the Committee.*
2. *Suggestion by Mr. Rendel for the Appointment of a Commission for dealing with Questions of Rates and Fares.*
3. *Views of the Government of India as to the powers to be exercised by the Local Governments and by the Companies, respectively.*
4. *Amount of Rates and Fares, great Advantage in these being as low as possible.*

1. *Concurrence of Evidence in favour of Government Revision and Control, Recommendation to this effect by the Committee*

Expediency of Government control and adjustment of the rates, *Sir J. Caird* 393—Absence of any practical control of the rates by Government where a maximum has already been fixed, degree of restriction desirable, *Strachey* 1152, 1191, 1192

Advantage of a four per cent. guarantee as enabling Government to prohibit unduly high rates, *Coke* 1379-1389—Examination as to the amount of control which should be exercised by the Government over the guaranteed companies, importance of the Government having power to bind companies to carry grain to famine districts at low rate, *Trevor* 1589-1591, 1661-1664—Strong opinion that the Government should, when giving a guarantee, take power to control the rates, *Lord* 2568-2571.

Examination as to the control which it is advisable that the Government should exercise over rates; strong opinion that the present Committee should recommend that Government should retain the power in any new concession to fix the rates, and not give it up under any circumstances, *Bythell* 2615-2652, 2654-2663, 2666-2703—Expediency of the Government borrowing money for the construction of railways as State undertakings rather than that they should give up the control over the rates, *ib.* 2650—Disapproval of an arrangement by which the Government should only intervene as regards rates after a definite rate of interest had been paid, belief that such an agreement would be impracticable because of disputes as to what constitutes capital, and what revenue, *ib.* 2651-2653, 2655-2656.

Expediency of the Government, having complete control over the rates and goods traffic on the guaranteed lines, *Graham* 2741-2744; *Hardie* 2828-2830, 2843-2846—Approval of there being maximum rates in the case of any new railway, and that the Government should have power to vary the rates from time to time, *Dickens* 3319-3324.

Strong opinion that in India the Government should have power to reduce and modify the rates, so that the charges might be just to the railway companies, and at the same time a benefit to the public, *Birkmyre* 3361-3364—Greater accessibility of the Government in regard to the reduction of rates than is the case with private companies, *ib.* 3460, 3461—Contention that in no sense is it a function of the Government so to impose rates that the export trade should be stimulated, *ib.* 3468, 3469

Explanation

RATES AND FARES—continued.

1. *Concurrence of Evidence in favour of Government Revision, &c.*—continued.

Explanation in regard to the contract between the East Indian Railway and the Government as to the settlement of the rates and fares; impossibility for the company to reduce the rates without the sanction of the Government, *Crawford* 3782-3791 3816-3822.

Examination respecting the control exercised by the Government over the rates and fares, and the large increasing traffic which has resulted from reduction of rates and fares on the East Indian and other railways, *Conway-Gordon* 4313-4325, 4357-4368 — Considerable difference of opinion which existed in 1867 between the Government of India and the Secretary of State with regard to the competency of the former to reduce the rates and fares, *ib.* 4314-4319—Decided opinion that the Government should keep in their own hands some control over the fares of the lowest class of passengers and over the rates for agricultural and mineral produce, *ib.* 4368, 4369.

Further examination with reference to the contract over the rates and tolls, great difficulty in adopting any system by which the Government can, fairly to the companies, maintain a control, *Conway-Gordon* 4408-4415 4419, 4420, 4453-4460, 4504-4546, 4616-4619—Expediency of not having the maxima rates fixed by the Government at an absolute amount; suggestion that they should not exceed 10 per cent, in excess of the rates in force on the East Indian Railway, *ib.* 4507-4515.

Suggestion as to the control which the Government should exercise in regard to the rates for traffic both for passengers and goods, *Robertson* 6559.

Opinion of the Committee that the Government should retain in their hands a power of fixing or from time to time varying the maximum of fares and rates, subject to adequate provisions for securing the interests of investors, *Rep.* xi.

2. *Suggestion by Mr. Rendel for the Appointment of a Commission for Dealing with Questions of Rates and Fares.*

Great difficulty with regard to the question of rates and fares; suggestion that a commission of three persons, one representing the public and one the companies, whilst the third might be a judge, should be appointed to settle all questions as to the rates and fares, *Rendel* 5644-5651, 5823-5828, 5864-5866, 5928-5936, 5974 6003, 6004 — Grounds for objecting to the rates being settled by Government, *ib.* 5646—Belief that the appointment of the proposed commission would not discourage investors, *ib.* 5647.

3. *Views of the Government of India as to the Powers to be exercised by the Local Governments and by the Companies, respectively:*

Resolution of the Government of India, dated 6th October 1868, together with observations and explanations on the subject of rates and fares, *App.* 792-794—Conclusion that the maxima of rates and fares should be fixed by the local governments, that the actual charges within such maxima shall be regulated by the railway companies, and that the maxima shall leave a reasonable margin for the exercise of a discretion by the companies in varying the working rates, *ib.* 794

4. *Amount of Rates and Fares, great Advantage in these being as Low as possible:*

Higher rates for carriage of wheat charged by the Indian railways than is charged in America, *Bythell* 2625 —Argument that the reduction of railway rates would lead to material increase of traffic, *ib.* 2621-2630 2626 2685-2687.

Great importance that the rates charged on Indian railways should be kept at a low figure, *Hardie* 2828-2830, 2843-2846, *Birkmyre* 3399, 3408-3410 3460, 3461, 3468, 3469 3488-3494—Statement that in India reduction of railway rates always means increased dividends, examples in support of this conclusion, *Birkmyre* 3436-3438.

Complaint of the natives that the third-class fares are not sufficiently reduced to touch the poorest class; conclusion that these fares might be advantageously reduced still further, *Conway-Gordon* 3563-3569 3655, 3656

The first-class fares pay little or nothing in proportion to the rest of the traffic, *Crawford* 3792—Probability that if the third-class fares were reduced still further than they are at present it would entail large expenditure upon rolling stock on account of the increased numbers that would use the lines, *ib.* 3793-3796, 3819-3822, 3850, 3856.

Strong objection made by Lord Mayo to the maximum fare being maintained for third-class passengers, *Conway-Gordon* 4317—Details respecting the reduction of rates and fares on the Oudh and Rohilcund, East Indian, and Indus Valley lines, and the great increase of traffic and revenue consequent thereon, *ib.* 4322-4325—Statement that there is no indication whatever that the reduction in the rates has reduced the net earnings in the aggregate of the railways in general, *ib.* 4325

Strong opinion that nothing can benefit Indian railways so much as a reduction of rates, *Rendel* 5649-5651, 5805-5822 — Statement that the average rate charged in 284.

RATES AND FARES—continued.

4. *Amount of Rates and Fares; great Advantage, &c.—continued.*

India for passengers and goods is intended to include all the working expenses, the rates for goods are simply the whole of the goods receipts of the railway divided by the whole of the goods ton mileage, *Rendel* 5842-5847.

Conclusion that in the interest of the public, and of the railway companies themselves, the rates should be reduced; successful competition of the cart traffic with some of the railways on account of the rates being so high, *Ashburner* 6345-6347, 6386-6396.

Desirability of reducing the rates and fares to as low a point as is compatible with fair profits; suggestion that the rates should be regulated by legislative enactment, as is done in this country, *Dancers* 6889-6891, 6923-6924, 6993-7003.

Statement showing present and past rates per maund for grain carried to Bombay by the Great Indian Peninsula Railway, and the per-centage of increase on the rates in January 1884 as compared with January 1881, *App* 593.

Table showing the maxima fares and rates sanctioned for each of the guaranteed railways, *App* 795.

See also *Competition. East Indian Railway. Financial Results of Railways. Great Indian Peninsula Railway.*

Rawul Pindt-Murree Railway (Punjab). Length and cost of this project, as proposed by the Government of India to be left to private enterprise, *App* 529.

Remittances. Very great and serious difficulty at times in the sale of bills by the Secretary State, the remittances from India being directly affected by the produce coming forward, *Strachey* 197-212—Increased remittances of English capital, effect, on the other hand, of increased exports from India in causing increased remittances to India, *ib* 1210-1212.

Examination as to the amounts of Government remittances to England since the year 1868-69, if the Government are to borrow in England the present proposals will add to the amount of the annual remittances, *Westland* 5193-5219—Principal part of the remittance to England made by means of sterling paid to the Secretary of State in respect of demands issued by him upon the Indian Treasuries; the foundation of these remittances is the produce exported from India, *ib* 5205, 5206.

Possibility of meeting the demand for remittances to England by reducing the imports; large cotton industry springing up in India which, to some extent, will take the place of the present import of piece goods, and will affect the remittances, *Westland* 5207, 5208, 5351.

Large increase in the amount of remittances to England since the year 1868-69, decided opinion that those remittances tend to prevent the rupee rising in value, *Waterfield* 6099-6104, 6201-6203, 6240—Great importance of reducing as much as possible the amount of remittances from India to this country, which at present is as much as India can bear, *ib* 6202-6204.

Memorandum submitted by Mr. Wood in connection with Tables showing the advantages of taking up Indian loans in England instead of in India, that is, as regards remittances, *App* 691, 692.

Statement of the amount represented by remittances by the Home Treasury of the Indian Government in each year since 1867-68, *App* 696, 697.

Absence of loss in remitting the dividends to England unless the value of the rupee should fall yet further, *Rep.* 12.

See also *Exchange, Loss by. Loans*.

Rendel, Alexander Meadows. (Analysis of his Evidence)—Is Consulting Engineer to the East Indian Railway Company, and has had large experience in the construction and working of railways in India, as consulting engineer is responsible for all the work and material which goes out from this country, 5621.

Statistics as to the cost of working the East Indian Railway, showing the remarkably low rate at which both passengers and goods are carried; general admission that there is no railway in the world which is worked at so low a cost as the East Indian, 5621-5623, 5718-5720—Introduction into India by witness, in conjunction with General Strachey and Mr. Dancers, of a new system of statistics similar to those in use in America, belief that the non-adoption of this system in England is the cause of a very great loss in the working of railways, 5621, 5749-5770.

Large amount of extraordinary work being carried out on the East Indian Railway at the present time at the expense of revenue, 5621—Assertion that the traffic on this railway is as large as that on the London and North Western line, and is carried at one-half the charge and one-third the cost, 5621-5623.

Large power possessed by the East Indian Company of still further reducing the rates, if it should be necessary, 5621—Two-thirds of the line are single, and one-third double, 5622, 5625.

Report, 1884—continued.

Rendel, Alexander Meadows. (Analysis of his Evidence)—continued.

Statement that although one or two of the metre gauge lines carry heavier passenger loads than the East Indian, they do not carry so much goods on the whole, 5623— Closeness with which the Bombay and Baroda line follows upon the East Indian in regard to the amount of traffic carried, *ib*

Information generally respecting the origin, advantages, and extension of the metre gauge system in India; grounds for the conclusion that all railways remaining to be made, with some exceptions, should be constructed on this gauge, 5624, 5625, 5710—5717 5789-5792, 5851-5854 5873-5875 5889-5893, 6011, 6012—Original promotion of the narrow gauge in India by an engineer in the service of the East Indian Railway Company, named Wilson; construction by him of a narrow gauge line from Nulhati to Azingunge at a cost of about 4,000 *l* a mile, 5624.

Committee appointed in 1870 to decide as to the actual narrow gauge to be adopted permanently, decision in favour of the metre gauge, 5624—Belief that there will in India be no traffic that cannot be carried upon a narrow gauge line, *ib*—Statement that as regards expensive lines the difference in cost of construction between the narrow and the broad gauge is exceedingly trifling, and need not be considered, marked difference in cost as regards the low-priced lines, *ib*.

Estimate that the cost of construction in the future of broad gauge lines will be about 6,000 *l*, and of metre gauge about 4,500 *l* a mile, 5624, 5675-5688, 5938-5948—Proposal as to the construction of 2,000 miles of railway in the Nizam State, which, if constructed on broad gauge, will require twelve, and if on the narrow, nine millions sterling; contention that unless there is some political or military question involved the narrow gauge is the proper gauge for these lines, 5624, 5991.

Explanation that the traffic of the East Indian Railway, both in passengers and in goods, is about twice as much as that of any other Indian line, 5624—Approximation of the traffic on the Rajpootana Railway at the present time, to that of the East Indian in the year 1872, *ib*.—Opinion that if the Rajpootana line were to be doubled to the same extent as the East Indian, the traffic might be trebled without the smallest difficulty, 5624, 5910, 5953-5959.

Statistics showing that the cost of working the broad gauge is considerably greater than in the case of the narrow gauge, cost of working any railway largely affected by the quantity of traffic, 5624, 5625 5689-5692, 5878-5883, 5949-5952, 6024-6023—Large increase of traffic in both passengers and goods on the Nagpur and Chattisgarh Railway, which is a metre gauge line, 5624, 5707.

Undoubted effect of increased traffic on metre gauge lines that the cost of carrying will decrease, 5624—Conclusion that of all the circumstances affecting the cost of working a railway, gauge is the least important; contention that quantity of traffic, gradients, cost of coal and labour, and management, are far more important items, 5624 5691, 5692.

Large increase required in the weight of the engines on the Rajpootana line, importance of drafting all the existing engines on to lines where the traffic is limited, and replacing them with heavier, 5624, 5876, 5877—The third-class carriages on the Rajpootana Railway are better than the average English third-class carriages, 5625.

Increased weight of rails used on the Indian lines at the present time, chiefly on account of the reduced cost, iron rails on the Rajpootana cost 14 *l* a ton in 1873, whereas steel rails can be now obtained for 5 *l* a ton, 5626, 5627 * 5686-5688—Statement that the metre gauge has developed railway traffic in India to a degree that at starting was never anticipated, 5628.

Examination with reference to the expense and inconvenience of break of gauge; grounds for the opinion that there is no evil in the break of gauge beyond the mere cost of transfer, 5620-5636 5708, 5709 5796-5804, 5884-5886, 5895-5897, 6016-6019, 6027, 6028—Contention that the amount of break of gauge in England is far greater in proportion than it is in India, 5629-5633—Explanation that on the Rajpootana Railway the cost of break of gauge is about equivalent to the cost of constructing and working ten miles of railway, 5634-5636.

Information as to the form of agency which is best to be adopted for making new railways in India; opinion that it is inexpedient that the Government should either make or work the lines, 5637-5643 5828-5840 5855-5859—Strong feeling that it is essential for the future of Indian Railways that the freedom of them should be in the hands of the Government; the companies should construct the lines simply as contractors for the Government, 5639-5643 5693-5696.

Statement that in India what is required for the construction of railways is an investing and not a speculating class, 5640—Approval of the South Mahratta contract as the type for future railway contracts, 5641-5643, 5999-6002

Great difficulty in regard to the question of rates and fares, suggestion that a Commission of three persons, one representing the public, and one the Companies, whilst the third might be a judge, should be appointed to settle all questions as to rates and fares,

Rendel, Alexander Meadows. (Analysis of his Evidence)—continued.

5644-5651. 5823-5828. 5884-5866. 5923-5935. 5974. 6003, 6004—Belief that the appointment of such a commission would not discourage investors, 5647—Strong opinion that nothing can benefit Indian railways so much as a reduction of rates, 5649-5651. 5805-5822.

Grounds for deprecating a sudden and rapid extension of railroads in India, belief that a sudden expansion will lead to a very considerable waste of money, 5652-5657. 5670-5673. 5887, 5888—Great importance of employing only competent and experienced men as engineers; calculation that the difference between an experienced and an inexperienced engineer is as much as 1,000 *l.* a mile on railways which cost 6,000 *l.* a mile for construction, 5652-5657. 5666-5671. 5721-5725. 5841. 5860-5863. 5991-5993.

Opinion that there is no country in the world which requires railways more than India, expediency of constructing 50,000 or 60,000 miles gradually and carefully, 5658, 5659. 5722. 5848-5850. 5991-5998. 6020-6023—Undoubted belief that railways, if constructed economically, at about 4,500 *l.* a mile on the narrow gauge, will, in the future, be a source of large revenue to the country, 5660, 5661.

Extensive districts where the culture of grain would be very much stimulated and increased by the construction of railroads; vast portions of the country that are not within reasonable distance of any line at the present time, 5662-5665. 5975-5989—Greater importance of creating local traffic than of considering export traffic with communications to the sea, 5662-5665. 5975-5990.

Considerable difficulty which would be experienced in obtaining competent engineers in the event of any increase in the proposed amount of railway construction, 5668-5674—Greater facility of reducing the weight of the engines on the narrow than on the broad gauge lines, 5687.

Statement with regard to the financing of railways that every attempt to raise money in India has been a failure, 5698—Example in the case of the South Mahratta, where 500,000 *l.* was reserved for Indian subscription, and only 10,000 *l.* was obtained, *ib.*—Absence of any greater advantage in a direct Calcutta and Bombay railway than there would be in opening out any other district; entire absence of through traffic other than first-class passengers going by the English mail, 5699-5705.

Extraordinary absence of demands for compensation upon the Indian railways, when compared with similar demands in England, explanation of this freedom from accident, 5709. 5726-5748. 5927—Opinion that there is no necessity for a line half broad and half narrow gauge between Calcutta and Bombay; belief that the cost of making such a change would be something like a million sterling, 5710-5713.

Proposal at the present time that on the East Indian line the American bogey waggon shall be substituted for the ordinary waggon, with the object of reducing the dead weight on the broad gauge, 5715, 5716—Important consideration that if railways are to be extended, the cost of working as well as the cost of construction must be cheap, 5718-5720.

Explanation as to the origin of the system of statistics adopted by the East Indian company, 5749—Grounds for believing that the introduction of a similar system of statistics as to the working of railways in England would lead to much greater economy, utter waste of power in England on account of running far more trams than the traffic requires, 5750-5754.

Wasteful competition which is carried on in England, which managers attempt to meet by providing increased facilities rather than by lowering the rates; belief that if the public had the choice they would prefer the reduction of rates, 5755. 5867-5871—Entire absence in India of railway competition in the English sense, 5760-5762—Comparison as to the cost of conveyance of both passengers and goods on the Indian and the English railways; argument that the Indian cost is so much lower on account of the smaller waste of power, 5763-5786.

Prosperous condition of the Indian railways generally; assertion that if taken together they are paying more than the interest of the money raised to carry them out, 5793-5795—Conclusion that the guarantee given by the Government in the case of the proposed new lines should be limited to that rate which will be sufficient to raise the money required, 5830-5838. 5872.

Statement that the average rate charged in India for passengers and goods is intended to include all the working expenses; the rates for goods are simply the whole of the goods receipts of the railway divided by the whole of the goods ton mileage, 5842-5847—Opinion that the disadvantages of a mixed gauge do not outweigh the comparative cheapness of the metre gauge, 5889. 5892.

Expediency that in all future extensions of railways uniform gauge should be aimed at, that is, the narrow gauge, 5898—Contention that large districts may be covered with narrow gauge lines, which districts would never be served if broad gauge were insisted upon,

Rendel, Alexander Meadows. (Analysis of his Evidence)—continued.

upon, 5898—Grounds for the belief that the metre gauge is entirely sufficient to carry any traffic that is likely to be brought upon it, 5899-5908

Explanation that on all railways the cost of repairs pays for itself, the repairs being in proportion to the traffic carried, 5911-5917—Unimportance of a high rate of speed upon Indian lines, twenty-five miles an hour for third class passengers is quite fast enough, 5918-5921—Conclusion that the whole secret of the low working cost in India is due to utilising the trains to a greater degree than is the case in England, 5922-5926—Statement that the directors of the Indian Railway Companies are, as a rule, nominated by the other directors, the nomination being subsequently confirmed by the shareholders, 5964-5971—Opinion that a board of directors in India as well as in England would be a mistake, 5973.

Belief that railway materials, including rolling stock, were never so cheap as at the present time, 6005-6010—Bad character of the Wardha coal, opinion that as far as this coal is concerned the Hyderabad Railway is not very much needed, 6013-6015.

Repayment of Capital. See *Purchase of Undertakings.*

Reproductive Works. See *Productive Lines.*

Responsibility (Railway Extension) Exception taken to the restraint imposed by the Secretary of State upon the Government of India; approval of the responsibility of acting upon general recommendations being thrown upon them jointly, *Strachey* 6-8. 356-362.

Expediency of responsibility in the matter resting with the Government of India and the Secretary of State, without pressure from external authorities, prospect of concession on the part of the India Office in the direction of the requirements of the Government of India, *Strachey* 28-30—Approval of the ultimate authority still resting with the Secretary of State as regards questions of railway extension, purchase, &c., *ib.* 1193.

Disapproval that the power to limit the expenditure upon public works should be mainly in the hands of the Secretary of State in Council, it is impossible for an authority so far away from India to be certain of what is going on in that country, *Conway-Gordon* 3628-3631.

See also *Extension of Railways* *Expenditure.* *Loans.* *Productive Lines.*
Protective Lines.

Revenue and Expenditure (Generally). See *Financial Condition of India* *Loans*

Revenue and Expenditure (Railways). See *Expenditure (Railways).* *Financial Condition of India* *Financial Results of Railways.* *Guaranteed Railways.* *Loans.* *State Railways.*

Rewari-Hissar-Ferozpur Railway. Reference to the Rewari and Hissar line as one of the first constituted as a protection against famine, its value for this purpose, *Westland* 4751.

Case of the Rewari-Ferozpur line, for which there was much difficulty in obtaining the sanction of the Secretary of State as a protective line, whilst it has since become remarkably productive, *Conway-Gordon* 5367. *

Proposals in letter from the Government of India of 22nd July 1881, for the construction of the Rewari-Ferozpur line, as one of a series of railways for protection against famine, *App.* 492-495

Progress being made with the line, as in January 1883, *App.* 524.

Documentary evidence submitted by Major Conway-Gordon respecting the line to Ferozpur, as proposed by the Government of India, its advantages, estimated cost, &c.; sanction given by the Secretary of State, *App.* 854-859 919.

Rice. Enormous increase which would take place on the export of rice if the Burmah Railway were made, and if the Government duty were removed, promise made ten years ago by the Secretary of State that this duty should be removed whenever the financial position of India would allow of it, *Coke* 1421 1448, 1449. 1526 1557.

Question before the Government for some time with reference to a reduction of the export duties upon rice in Burmah, which is postponed until the railway policy has been carried out, *Westland* 5120-5134—Argument that although the export duty on rice is for the benefit of the whole of India, yet the natives of Bengal and Bombay get the entire benefit of the trade, *ib.* 5322-5330.

Conclusion that if the annual expenditure upon railways be increased by a million, it will not be possible to reduce the export duty on rice, *Westland* 5354—Possibility that the increase of revenue from the railways in the future will enable the Government to remit the duty on rice, *ib.* 5354, 5355

Roads Great deficiency of metal for making roads in the Lower Provinces of India, advantage in these districts of having short lines of railways upon the embankments which are prepared for the roads, *Conway-Gordon* 5438, 5439—Less cost of a railway than of a road in some districts, *Ashburner* 6319

Robertson, D. T. (Analysis of his Evidence.)—Long and intimate experience of witness in regard to the Government loan operations in India, he having been in charge of one of the Exchange Banks since 1860, he is also a director of the Bengal Central and of the Rohilkund and Kumaon Railway Companies, 6545-6547. 6551, 6552.

Information generally with reference to the Government Rupee Loans; statement also as regards the capacity of the Indian and of the English markets to absorb the capital required, 6548-6550. 6570-6582. 6602-6608. 6647-6651. 6656 6661. 6687-6691.—Decision of the Government in 1858, on the recommendation of the merchants and bankers of Calcutta, that interest on rupee paper would be made payable at the Bank of England by drafts on Calcutta, 6650.

Prosperous state of India indicated by the growing importation of gold, which has largely increased since the year 1877, 6550.—Strong opinion that the consolidation of the fourteen existing Rupee Loans into one or two loans would greatly tend to make them popular, both in England and in India, 6550. 6687-6691.

Contention that the contract entered into with the South Mahratta Company is disadvantageous, chiefly for the reason that the stock is at a discount, until the Government came to the rescue and authorised the issue of debentures, the stock was unsaleable at par, 6553-6558. 6593-6590. 6652-6654. 6670-6686. 6690-6711. 6714-6716.

Consideration of the methods most suitable for bringing forward new railways in India; expediency of the Government making the terms acceptable with the public by giving either a complete or partial guarantee, 6558. 6560-6563. 6591-6597. 6609-6646.—Approval of the Government reserving under certain contracts the right of purchasing the lines after twenty-five or forty-five years; notice of one year given to the companies in these circumstances, 6558 6655.

Suggestion as to the control which the Government should exercise in regard to the rates for traffic both for passengers and goods, 6550.—Opinion that it would not be possible to find companies to continue to make railways on Bengal Central terms, 6560-6563.

Statement that it is impossible to forecast the future of the silver market, as there are so many circumstances which affect it, 6584-6589.—Argument that as regards the South Mahratta contract, the terms should be advantageous to both parties, contention that it will be impossible to repeat the terms made with that Company, 6583-6587. 6652-6654. 6664. 6665.

Advantage of management through a company, on account of Government being saved the cost of increasing the establishments, paying for pensions, and such other charges, 6598-6601.—Belief that loans in silver, upon which interest was payable in Calcutta, would not be taken up in India beyond the extent of about a million-and-a-quarter a year, 6607, 6608 6658.

Expediency of giving companies, which are formed with a Government guarantee, the entire control over the management of their own lines, 6636-6641.—Relief that it would be impossible to control the companies in regard to where they should borrow, conclusion that they would borrow in the cheapest market, which would be this country, 6647-6651.

Conclusion that if there is to be any considerable extension of the railway system in India it will be necessary to borrow largely in England, either through companies or in connection with the Government, 6656-6660.—Desirability that the Government should, in the present uncertain state of the silver market, restrict its liability in respect of sterling loans in this country as much as possible, 6661.

Stimulus to the Indian export trade caused by the low rate of exchange throwing cheap money into the country, large extent to which the extension of railways has also assisted to develop the export trade, 6662-6671.—Belief that the development of the wheat trade would not have been so extensive had it not been for the low exchange, 6666.—Opinion that a fall in the present rate of exchange would not have any very beneficial effect in India, 6668-6671.

Rolling Stock. See *Engines and Rolling Stock. Gauge. Working Expenses.*

Running Powers. Absence in India of any running powers, or facilities in return, as affecting particular traffic, *Crawford* 3872-3876.

Rupee Loans. See *Exchange, Loss by. Loans. Silver.*

Russia. Impression as regards the great extension of railways in Russia in comparison with India, that such extension is largely for military purposes and has had a very injurious effect upon Russian finance, *Strachey* 159-161.—See also *Quetta Railway*

Rutlam-Godra Railway (Central India). Length and cost of this project, as proposed by the Government of India to be left to private enterprise, *App.* 530

Ryots. Concurrence of evidence as to the very beneficial operation of railways with respect to the condition of the natives of India, *Rep.* vii, 3111.

See also *Condition of the People. Cultivation of the Soil.*

S

Saharanpur-Roorkee-Moradabad Railway Particulars respecting this line, as proposed by the Government of India in letter of 23rd January 1883, *App.* 513—Progress being made with the line, as in January 1883, *ib.* 526

Salaries. Lower salaries paid to the Government servants than to those of the companies; willingness, however, of unemployed companies' servants to come to the Government at a lower rate, on account of the greater certainty of employment, *Conway-Gordon* 4738-4742

Savings Banks. Large amounts deposited by the people in the Savings Banks, especially in Bombay, where the deposits are growing at the rate of ten lacs a year, post office savings banks lately instituted, which have been successful in attracting the savings of the agricultural class, *Westland* 4795-4799 4843, 4844.

Scinde, Punjab, and Delhi Railway. See *Sind, Punjab, and Delhi Railway*

Seccombe, Sir Thomas Lawrence, K.C.S.I., C.B. Evidence of Sir Thomas Seccombe before the Select Committee on East India (Public Works) in 1879, *App.* 654-690

Importance attached by the Committee to the evidence of Sir Thomas Seccombe in 1879 upon the question of diverting any portion of the famine insurance provision as a means of obtaining capital for railway extension, *Rep.* ix.

Secretary of State in Council (India Office)—See the *Headings generally throughout the Index*.

Seeds Statement of the exports of seeds (Indian produce) from India to different foreign countries in each year from 1871-72 to 1882-83, *App.* 768

Settarampur See *Bilaspur-Etawa Railway*.

Select Committee of 1878-79 Entire reversal by the proposals of the Government of India of the productive works policy laid down by the Committee of 1878-79; *Westland* 5135-5138

Summary of the conclusions and recommendations of the Select Committee of 1878-79, proposal by the Committee that the expenditure on productive public works should for the present be limited to 2,500,000 *l.* a year, *Rep.* iii.

Self-Supporting Lines Decided opinion of the Committee that the bulk of the new lines to be made should be self-supporting, *Rep.* xi

See also *Financial Results of Railways* *Productive Lines.*

Shoranoor-Cochin Railway (Madras). Length and cost of this project, as proposed by the Government of India to be left to private enterprise, *App.* 531.

Silver, Value of. Statement that during the past few years India has been receiving silver very cheaply, and for that reason there must have been in some form or other a great gain to the country, *Bullen-Smith* 2457-2459.

Consideration of the effect of the suspension of the Bland Bill; tendency hereof to cause a fall in the value of silver, *Hardie* 2798-2800 2911-2914 2921 2997-2999—Opinion that India has benefited very much by the fall in the value of silver, and that the Anglo-Indians upon salaries, and with savings in India, are the only individuals who have suffered, *ib.* 2820-2822 2832-2834 2970-2973

Causes which have led of late years to the depreciation of silver, considerable diminution in the export of silver from America within the past few years, *Waterfield* 6100 6101 6176-6178. 6254-6259—Grounds for the opinion that it is unwise for the Government to speculate in regard to the chance of the value of the rupee taking an upward direction, conclusion that there is greater risk in calculating the future value of silver when paying interest on sterling loans than there is in paying a high rate down, *ib.* 6231-6239 6260-6263

Statement that it is impossible to forecast the future of the silver market, as there are so many circumstances which affect it, *Robertson* 6564-6569.

See also *Exchange, Loss by.* *Loans.*

Sind, Punjab, and Delhi Railway Costliness of the Sind, Punjab, and Delhi line, though it is very useful for famine protection, *Sir J. Caird* 443—Extension of the railway by means of debentures, because of the refusal of the Government to sanction the construction from guaranteed funds, *Trevelyan* 1571-1574

Sind, Punjab, and Delhi Railway—continued.

Revenue accounts for each half-year from 31st December 1881 to 31st December 1883; *App.* 760, 761.

Statement showing for each year the mileage, average age, cost, and general results of working, *App.* 771, 772.

Statistics of the cost of working under different heads, *App.* 798 *et seq.*

Sindia Railway Statement showing for each year the mileage, average age, cost and general results of working, *App.* 779.

Sleepers. See *Rails and Sleepers*

Sonepur-Hajipur Railway. Documentary evidence submitted by Major Conway-Gordon respecting this line, as proposed by the Government of India, its advantages, estimated cost, &c., sanction given by the Secretary of State, *App.* 876-879 919

South Indian Railway Revenue accounts for each half-year from 31st December 1881 to 31st December 1883, *App.* 760, 761.

Statement showing for each year the mileage, average age, cost, and general results of working, *App.* 773.

Statistics of the cost of working under different heads, *App.* 798 *et seq.*

SOUTH MAHRATTA COMPANY

1. *Information relative to the Government Arrangement with the Company, its Advantages.*
2. *Approval of a similar Arrangement with other Companies.*
3. *Pictative Character of the Line, which is on the Narrow Gauge, and will soon be opened*
4. *Views of the Government of India on Approval of the Line.*
5. *Exchange in connection with Capital Transactions.*
6. *Very small Local Capital subscribed.*

1 *Information relative to the Government Arrangement with the Company, its Advantages*

Particulars of the arrangement with the Southern Mahratta Railway Company, the latter finding the capital (3,000,000 l.), and constructing and working the lines, whilst Government pay them 4 per cent. for the first four years, and 3½ per cent. afterwards, until they apply to have the capital repaid; other conditions included, *Strachey* 38-54—Inducement to the Company to construct the line as cheaply as possible, as they receive only a fixed amount as interest or guarantee, *ib.* 41. 58 73 78.

Further explanatory statement relative to the arrangement with the South Mahratta Company, who receive their interest in rupees in India, at the equivalent of 3½ per cent. sterling in London, and have to make their remittances home; respects in which this system is advantageous, irrespectively of the question of the rate of exchange, *Strachey* 76-80. 199-223—Reference to the terms made with the Company as being a little too hard on the part of Government, *ib.* 76-80. 82.

Modification of the terms of the South Mahratta contract, in order to induce the Company to carry out a certain extension of the original scheme, *Strachey* 245, 246—Further approval of the principle in the case of the Company, whereby the Government is the owner of the line, and regulates the rates, the Company acting as agents for working the line, *ib.* 253, 254-374.

Success of the arrangements for obtaining capital for this line, though the shares have been at a discount through the smallness of the guarantee; complicated character of the arrangements, *Strachey* 292-294—Strict Government supervision over the expenditure on the line, *ib.* 305-307—Illustration, in the case of the South Mahratta line, of the value of construction by the Company, rather than by the State, *ib.* 374.

Information as to the terms of the Government guarantee to the South Mahratta Company, unique character of the contract with this Company, *Trevor* 1696-1714. 1725. 1732-1738—Approval of the system of guarantee given by the Government to this Company, statement generally in regard to the terms, *Lord* 2480-2482. 2514, 2515.

Permanent guarantee of three-and-a-half per cent., and temporary guarantee of one-half per cent. for seven years given to the company, in addition to one-quarter of the total net earnings, *Dickens* 3066-3073. 3313—Capital of 1,700,000 l. raised by the Company by means of debentures, in the same way as is suggested by witness, *Westland* 4857, 4858.

Guarantee received by the South Mahratta Company, who construct and work the line as agents for the Government, who are the owners; absolute payment of the guarantee to the Company in the equivalent of sterling, *Waterfield* 6078-6080. 6084—Grounds for adopting the payment of such a number of rupees as will produce the requisite sterling sum in England, *ib.* 6079, 6080.

SOUTH MAHRATTA COMPANY—continued.

1. Information relative to the Government Arrangement, &c.—continued.

Approval of the terms entered into by the Government with the South Mahratta line, which were advantageous to both parties, *Ashburner* 6359, 6359—Contention that the contract is disadvantageous chiefly for the reason that the stock is at a discount, until the Government came to the rescue and authorised the issue of debentures, the stock was unsaleable at par, *Robertson* 6553-6558. 6583-6590. 6652-6654. 6672-6686. 6692-6711. 6714-6716

Explanation of the terms by which the Government are bound to the South Mahratta line for twenty-five years, *Danvers* 7104-7106—Arrangement made with the company for a rupee payment in India equivalent to a sterling payment, approval of paying the interest in England in sterling, *Westland* 7134, 7134*

Summary by the Committee of the terms in the case of the Southern Mahratta Company, *Rep A*—These terms offer a permanent security to investors, which is equal to the security of the Government of India, with the addition of a quarter of the net receipts of the line, *ib*

2. Approval of a similar Arrangement with other Companies:

Explanation that though witness strongly objects to a limited guarantee, or any system of guaranteed interest, he approves of interest on capital under such limitations as in the case of the South Mahratta Company, *Strachey* 346-351.

Advisability in regard to railways that are not likely to pay more than 4 per cent of adopting similar terms as have been given to the South Mahratta Company, *Dickens* 3066-3073. 3313

Desirability for the Government in the future to establish lines on similar terms to those arranged with the South Mahratta line, *Crawford* 3996-4002

Great importance that the profits of a line should always be calculated upon a rupee basis, as in the case of the South Mahratta Railway, *Westland* 4771.

Approval of the South Mahratta contract as the type for future railway contracts, *Rendel* 5041-5045 5999-6002

Argument that as regards the South Mahratta contract, the terms should be advantageous to both parties, contention that it will be impossible to repeat the terms made with that company unless they are improved, *Robertson* 6583-6587 6652-6654 6694, 6695.

Approval of the Government giving to private companies similar terms to those of the South Mahratta Company, in the case of lines which are not expected to be remunerative; opinion that the same terms should be granted to famine lines, *Danvers* 6874. 6885 6900, 6901 6943-6962. 7083-7106—Several advantages which would result from employing a company under the terms of the South Mahratta line, *ib*. 6957-6962—Opinion that if the payment of interest were made in sterling instead of a rupee transaction, the security would be more acceptable to the public, *ib*. 7091-7095

3. Protective Character of the Line, which is on the Narrow Gauge, and will soon be Opened

Very poor district served by a portion of the South Mahratta line, *Strachey* 288—Eminently protective character of the line, *Str J Caird* 390.

Belief that on the Mahratta line, which is a self-contained system, the metre gauge is very suitable, *Chapman* 763—The line is under construction, and will soon be partly opened, *Westland* 4751.

4. Views of the Government of India in approval of the Line

Proposals in letter from the Government of India of 22nd July 1881 for the construction of the line, as one of a series of railways for protection against famine, *App*. 492-495.

5. Exchange in Connection with Capital Transactions:

Particulars respecting exchange in connection with capital transactions; conflicting statements hereon on the part of the Secretary of State in Council and of the Government of India, *App*. 700-709

6. Very small Local Capital subscribed:

In the case of this company, 500,000 l was reserved for Indian subscription, but only 10,000 l was obtained, *Rendel* 5698.

Speed Slower rate of speed on the metre gauge than on the broad gauge, the latter lines run at a speed of twenty-three miles an hour, whilst the metre gauge running is from eighteen to twenty miles, *Trevor* 1688-1691.

Unimportance of a high rate of speed upon Indian lines, twenty-five miles an hour for third-class passengers is quite fast enough, *Rendel* 5918-5921.

Staff. Respects in which there is on the whole an advantage on the score of staff in favour of companies as compared with the State, *Strachey* 256-258

See also *Construction and Working Engineers. Public Works Department Salaries.*

STATE RAILWAYS.

1. Considerations generally as to the System of State Railways, as to the Extent to which desirable, and the Financial Arrangements to be adopted.
2. Proposals of the Government of India as to the Lines to be constructed.
3. Financial Statistics respecting the existing State Railways.
4. Approval by the Committee of the Action of the State as well as of Private Companies.

Considerations generally as to the System of State Railways, as to the Extent to which desirable, and the Financial Arrangements to be adopted

Belief that the construction and management of the State railways have been satisfactory, *Strachey* 71. 93—Disadvantage in the required railways being constructed by the State, on account of the large increase thereby to the debt of India, *ib* 1101-1108. 1126—Insufficient time hitherto for testing the financial results from the State lines, *Sir J. Caird* 390.

Conclusion that the construction of railways for protective or strategic purposes should be undertaken by the State; belief that works undertaken by the Government are quite as efficient and economical as those carried out by private companies, *Coke* 1281-1283. 1404-1406—Equally good management of the State lines as of the guaranteed railways, *Trevor* 1592-1604—Very great advantages in the lines being directly made by the Government, cheap rate at which the Government can obtain money if they make the railways themselves, *ib*. 1659, 1660.

Expediency of the Government borrowing money for the construction of railways as State undertakings, rather than that they should give up the control over the rates, *Bythell* 265c—Grounds for the opinion that the construction of Indian Railways should be entirely undertaken by the State, expediency if possible of constructing by contract, *Graham* 2716-2721. 2770-2775—Disapproval of the policy that the State should meet all the loss out of the lines that are considered productive, expediency of the Government owning the paying as well as the non-paying lines, *ib* 2733, 2734.

Strong approval of the proposed new railways being constructed partly by the Government and partly by companies with Government guarantees, expediency of giving the Government establishment paying as well as non-paying lines, with the view of keeping it efficient, *Dickens* 3058-3060. 3064, 3065. 3168, 3169. 3212-3215—Expediency of the Government, in the interests of the people of India, keeping a large portion of the profits of railways, and not giving them all over to the companies, *ib* 3305.

Proportion proposed to be expended directly by the Government and through the agency of companies, respectively, *Conway-Gordon* 3505—Conclusion that the proposed direct State expenditure will not affect in any way the balance of the general railway revenue or maintenance account, *ib* 3522, 3523—Proposal of the Government that the whole capital required for additions and improvements to the open State Railways should be considered as outside the fixed limit of annual capital outlay, *ib* 3546-3548.

Explanation as to the comparative advantages and disadvantages of the Indian Government constructing the railways, *Conway-Gordon* 4296-4298. 4369, 4370—Expediency of the Government retaining very much in its own hands a monopoly of the carrying trade of the country, grounds for this opinion, *ib*. 4303, 4304.

Desirability that the State should not earn more than the actual cost of the line, and that the profits of the railway should be only sufficient to pay the interest and the expenses, *Conway-Gordon* 4554-4559.

Necessity, if the companies do not come forward as anticipated, and if it is essential to construct the lines within the specified period, for the Government of India themselves to borrow over twenty-six millions; belief, however, that they are not prepared to execute the railways if so large a proportion falls upon their direct agency, *Waterfield* 6300-6311—Examination as to the agency to be adopted for the construction of the lines; opinion that the Government should not leave all the productive lines to the companies, but should make paying lines compensate for those which are not productive, *Ashburner* 6366-6364. 6380-6385. 6450. 6489-6491. 6534-6537.

Grounds for the opinion that the Government of India, if disappointed in getting companies to take up the proposed lines, will themselves borrow the money and undertake the construction, explanation that this course would not affect the financial position at being a mere question of agency, *Conway-Gordon* 6854-6364.

2. Proposals of the Government of India as to the Lines to be constructed:

Letter from the Government of India in January 1883, submitting, amongst various definite proposals, that the Government should only undertake the construction of lines which, from their unprofitable character, cannot be made by private agencies, *App* 509-523.

Details

STATE RAILWAYS—continued.

2. *Proposals of the Government of India as to the Lines, &c.*—continued.

Details respecting the several lines proposed to be made by the State, or other agency on its behalf, *App* 512-514

List of lines proposed by the Government of India in January 1883, the capital to be raised and interest paid by Government, *App*. 524.

List of lines submitted as indispensable, to be completed, or made by the State in default of other agency, estimates of cost, and of net revenue; *App*. 525-527 532, 533.

List of lines, the capital for which is proposed to be raised and the interest paid by the Government of India; *App* 524. 568 574.

3. *Financial Statistics respecting the existing State Railways :*

Continuous increase during the past five years in the revenue received from the State railways, details of the estimated receipts from these railways for the year 1884-85, *Westland* 4776.

Statement containing estimates of cost, and of net revenue, in the case of each railway with which the State has current accounts, in each of the five years 1883-84 to 1887-88; *App*. 534, 535.

Statement of the capital expenditure on State railways for each of the twenty-five years ending 1883-84; *App* 556.

Statement showing the direct annual gain or loss to the State from railway outlay in each year since 1858-59; *App*. 558.

Statistics showing in aggregate sums the total cost, gross receipts, working expenses, net revenue, &c., *App* 622

Statement submitted by Mr. Westland, showing the net earnings of each of the State railways in each of the years 1879-80 to 1883-84, *App*. 633.

Amount of capital outlay in each year since 1857-68; *App*. 698, 699.

Telegraphic communication from the Governor General, dated 22nd June 1884, submitting grounds for dissenting from certain conclusions embodied in Financial Despatch from the Secretary of State of 27th May 1884, *App*. 700, 701.

Despatch from the Secretary of State to the Government of India, dated 27th May 1884, containing explanations on the question of profit from the railways in connection with the loss on the exchange, &c., *App*. 702, 703.

Memorandum attached to Despatch of 27th May 1884, together with tabular statistics, in support of the conclusions arrived at by the Secretary of State in Council, *App* 704-709.

Tabular statements of annual expenditure, and of revenue, *App* 751 *et seq*

Abstract statement of working expenses in respect of each of the State railways in each year since 1868-69, *App* 716, 717.

Detailed statement showing the interest on debt incurred for productive public works in each year since 1869-70; *App* 720. 721.

Revenue since 1882-83 in respect of each of the State railways not classed as productive, *App*. 723.

Statement of expenditure on capital account in each year since 1867-68, *App* 724, 725

Statement of gross receipts from each railway since 1873-74; *App* 730, 731.

Statement showing the direct annual gain or loss to the State from railway outlay since 1867-68, *App*. 750

Revenue accounts of the several State railways for each of the financial years, 1881-82, 1882-83, and 1883-84, *App*. 751-753—Revenue accounts for each half-year from 31st December 1881 to 31st December 1883, *ib.* 762-765.

Administrative transactions of the different State railways for each of the years 1881-82, 1882-83, and 1883-84, *App*. 754-759.

Financial results of the transactions connected with the working of the several lines, *App* 852.

4. *Approval by the Committee of the Action of the State, as well as of Private Companies*

Conclusion of the Committee that State operations should be continued, together with construction and working by means of companies, *Rep.* vii. x.

Report, 1884—continued.

STATE RAILWAYS—continued

4. *Approval by the Committee of the Action of the State, &c.*—continued

Limitation of State operations according to the strength of the Public Works Department, the permanent staff of which it is not desirable to increase, *Rep x*

See also Administration and Management. Bhopal to Jhansi, Gwalior, and
Cawnpur. Construction and Working. Engineers. Extension of Rail-
 ways. Famines, and Famine Lines. Financial Condition of India.
 Financial Results of Railways Gauge. Loans Productive Lines.
 Protective Lines Rayputana - Malwa Railway. Rates and Fares.
 Taxation.

Statistics. Valuable statistical information respecting Indian railways given in the "Gazette of India," *Chapman* 745 881.

Compilation of the statistics of the working of Indian railways undertaken by the Railway Department of the Government, explanation that these statistics have not been specially prepared for the purposes of the present inquiry, *Conway-Gordon* 4337.

Tables of statistics prepared by witness for the use of the Committee, with regard to the financial position of Indian railways, *Westland* 5620—Statement that the statistical details of railway expenditure are not immediately procurable, but that they can be obtained, if necessary, by the India Office, *ib.*

Introduction into India by witness, in conjunction with General Strachey and Mr Danvers, of a new system of statistics similar to that which is in use in America; belief that the non-adoption of this system in England is the cause of a very great loss in the working of railways, *Rendel* 5621, 5749-5770—Explanation as to the origin of the system of statistics adopted by the East India Company, *ib.* 5749

Decided opinion that such statistics as were referred to by Mr. Rendel are of small importance; what is most wanted is an energetic traffic manager who is always up and down the line, *Conway-Gordon* 6844, 6845, 6851-6853.

Steel Rails Statement by Mr Bell, Chairman of the British Iron Trade Association, as to the present time being very favourable for railway extension in India on account of the greatly reduced cost of iron and steel railway materials, &c., *App* 647, 648

Imports of steel into India from the United Kingdom and from different foreign countries in each year since 1871-72; *App* 769.

See also Cost of Construction.

Sterling Loans. *See Loans*

Strachey, General R, R E, C S I, F R S. (Analysis of his Evidence)—Witness, who is now a member of the Council of India, was President of the Famine Commission, and was for many years connected with the Public Works Administration, 1, 2

Theoretical outline given in the Report of the Famine Commission in 1880 respecting the necessary extension of railways throughout India for the distribution of food in famine time, estimated requirement of something like 20,000 miles of railway if constructed fifty miles apart, 3—Considerable advance of construction since 1880, whilst the finances of India are in a better condition than they were four years ago, 4, 5

Action of the India Office since 1870 in the direction of restraining expenditure advocated by the Government of India for the more rapid extension of railways, 6—Gradual increase of the repressive action of the Secretary of State in Council, comment more especially upon the additional limitations imposed by the Despatch of Lord Hartington in January 1881, and upon the arbitrary distinction therein drawn between productive and protective lines, 6-8

Sanction given by the Secretary of State to the raising of borrowed money for productive lines, whilst it was prohibited in the case of protective lines, 7—Effect of the foregoing distinction that it prevented the construction of those lines which, as regards protection against famine, were the most needed, *ib.*—Objection, moreover, on the ground that the distinction in question is based on mere estimates of cost and receipts, tendency to unduly favourable estimates in the case of productive lines, 7, 8

Construction of Indian railways hitherto by means either of money raised by the Government and expended through its own officers, or of a guarantee of interest to private companies, who have thereby raised the money and carried out the lines, 9—Limit to the amount which capitalists are prepared to lend to Government for railway extension, that is, unless the rate of interest on loans be increased, 9-12.

Argument that the capital debt in respect of railways, and other public works, should never be so increased that the net charge upon it should exceed what may be considered a reasonable sum to be applied from the public revenue to stimulate the extension of public works, 12, 13—Realisation of the provisions of Lord Lawrence and Lord Mayo, there having been a gradual diminution of the charge, whilst in the present year there is a surplus of about a million, *ib.*

Entire dissent from the recommendation by the Select Committee of 1879 that the annual

Strachey, General R., R.E., C.S.I. F.R.S. (Analysis of his Evidence)—continued

annual sum to be spent by the Government on railways from borrowed money shall not exceed two and a half millions, 12 14, 15 224—Perfectly safe financial position in continuing to borrow money for railway construction so long as there is an absolute net income, after paying all charges, 14 16-18—Approval of money being borrowed for lines needed for military purposes, such as the line to Quetta, though not likely to be productive, 18.

Decided objection to the system of absolute guarantee on the capital outlay, not only as productive of a very great waste of money, but as creating for third parties a very valuable property at the expense of the taxpayers of India, 19 22—Forcible illustration in the case of the Eastern Bengal Railway of the enhanced amount of purchase money entailed on Government by the operation of the guarantee, at the expense of the resources of India, 19

Approval of railway construction by private companies, but without guarantee, 20-22, 31—Opinion that Government should be able to acquire the railways at a rate not exceeding the original amount of capital, 22—Effect of continuing the guarantee system that no lines will be undertaken by private enterprise without guarantees, single instance of the latter, 22, 23

Excessive character of the extensions proposed by the Bombay Chamber of Commerce and other parties outside the Government, 24, 25—Opinion that the proposals of the Government of India in January 1883 go beyond the real requirements of the country as regards protection against famine, much less extensive programme contemplated by the Famine Commission, 26-28—Circumstance of there having been as many as 2,000 miles under construction on 31st December last, 26.

Expediency of the responsibility in the matter resting with the Government of India and the Secretary of State, without pressure from external authorities; prospect of concession on the part of the India Office in the direction of the requirements of the Government of India, 28-30—Misfortune through the vote of the House of Commons to the effect that expenditure should be reduced, this having probably led to the appointment of the present Committee; expected arrangement otherwise between the Secretary of State and the Indian Government, 29, 30, 225, 226.

Several advantages in working the railways through the agency of companies, 31 92-94 104-114—Belief that the construction and management of the State railways have been satisfactory, 31, 93—Immense extent of India, and enormous business involved in the management of the railways, so that their administration by a central Government authority or railway commission would be little short of absurd, 31, 32—

Conclusion as to the necessity of decentralising the construction and management, and of devolving the responsibility generally upon the provincial Governments, careful consideration necessary in order to mature a scheme for this purpose, 32-37.

Explanation in approval of a suggestion in the Report of the Famine Commission that the advantages of private enterprise may be obtained by means of some substitute for the original form of guarantee, which shall give Government a more reasonable share of the profits, 38-54.

Particulars of the arrangement with the Southern Mahratta Railway Company, the latter finding the capital (3,000,000 £), and constructing and working the line, whilst Government pay them 4 per cent for the first four years, and 3½ per cent afterwards, until they apply to have the capital repaid, other conditions included, 38-54—Inducement to the South Mahratta Company to construct the line as cheaply as possible, as they receive only a fixed amount as interest or guarantee, 41, 58 73 78.

Respects in which construction by the State is probably less desirable than by private companies, witness approving of the latter course, provided economical construction can be secured, with a fair share of profits to the State, 55-75 92-94—Disadvantage of Government construction of railways and other public works, in so far as the progress is liable to interruption, works being sometimes suspended or delayed; enhanced cost thereby, 62-73—As to State construction of railways by contract, it is being entirely given up as unsatisfactory, 71.

Further reference to the terms made with the South Mahratta Company as being a little too hard on the part of Government, 76-80 82—Grounds for concluding that by offering slightly better terms than were given to the South Mahratta Company Government will obtain the required capital, even with the condition that they may purchase the lines at the original capital price, prospect of speculators coming forward in the first instance, 81-89—Doubt as to construction by Government being necessarily cheaper than by companies, 93, 99-103

Opinion that in view of what has already been done, the best course is to make new lines as occasion requires, the chief thing now required being to fill in cross lines between the main lines, 95-98—Desire of witness that railways in India should be extended as far as is financially justifiable, it being important to provide not only protective lines, but military lines, and to develop the resources generally of the country, 115-119

Strachey, General R., R.E., C.S.I., F.R.S. (Analysis of his Evidence)—continued.

Statement to the effect that in addition to the two and-a-half millions a year at present authorised to be borrowed for public works, there might be allowed another million (that being the present annual surplus from railways), 120-132. 136-144 179-181.—Objection to the surplus of a million being specially allocated as interest on a sum to be borrowed (say 25,000,000 £), witness submitting that such surplus is part of the general revenue of the State, and that it would be very unwise to appropriate a definite sum in advance for railways out of annual revenue, 125-130. 136-144.

Very large capital expenditure annually on railways over and above the two and a-half millions authorised to be borrowed by the Government; large outlay estimated for the coming year, 132-135.—Information respecting the progress being made with the construction of new lines; total of 2,967 miles under construction or sanction for 1884-85, of which it is estimated that 1,103 miles will be opened within the year, 145-150.

Indirect effect of the metre gauge in leading to much less cost in the construction of lines on the broad gauge, 151-154.—Capacity of the broad gauge as compared with the narrow in the proportion of one and-a-half to one, 155-158.—Impression as regards the great extension of railways in Russia in comparison with India, that such extension is largely for military purposes, and has had a very injurious effect upon Russian finance, 159-161.

Doubt whether the relief of famines will be any less costly by the construction of 5,000 additional miles of railway, though more people would be saved from starvation, 162-169. 177.—Statement to the effect that a capital outlay of 25,000,000 £ would provide about 5,000 miles of railway, which even in the famine districts would be more or less productive, and would provide something towards the interest, 170-178.—Further opinion that the arbitrary distinction drawn between protective and productive lines should be abolished, 179.

Explanation that witness does not propose to limit the outlay strictly to 3,500,000 £ in each year, as in future years the revenues may admit of a larger annual surplus than 1,000,000 £; 180, 181.—Very limited extent to which local capital is likely to be found for local lines, unless there be the inducement of a sufficient rate of interest, 182-186.—Satisfactory arrangement by which the Hathras line, only thirty-six miles long, in the North West Provinces has been made by the locality and the Government jointly, 183.

Approval, under certain limitations, of power in the localities or the Provincial Governments to levy a railway cess in order to make up the required rate of interest on new lines; that is, in the case of productive districts, 187-196 272-274.—Doubt as to the expediency of a system of local railway cess in aid of interest on protective lines, 192-196.

Grounds for the conclusion that it is exceedingly unwise to increase the sterling liabilities of the Secretary of State, either in the shape of a guarantee of interest in sterling or creation of sterling debt, 197-223.—Opinion that the power of borrowing in sterling should be reserved for times of difficulty and occasions of emergency, 197.

Compulsion upon the Secretary of State, by the force of financial circumstances, to borrow in England, though he has tried very hard to avoid it, 197.—Very great and serious difficulty at times in the sale of bills by the Secretary of State, the remittances from India being directly affected by the produce coming forward, 197-212.—Increase during the last eight years to the extent of 5,700,000 £ a year in the annual payments of the India Office in respect of the guaranteed railways, 197, 198.

Further explanatory statement relative to the arrangement with the Southern Maharashtra Company, who receive their interest in rupees in India, at the equivalent of three-and-a-half per cent. sterling in London, and have to make their remittances home, respects in which this system is advantageous, irrespectively of the question of the rate of exchange, 199-223.

Further objection to the surplus of one million from the railways being specially set aside as a means of meeting the guarantee of interest on additional capital expenditure, expediency of the action of Government respecting railways being regulated from year to year, 227-232.—Much larger real than nominal surplus of Indian revenues, the real surplus being reduced by the famine insurance and the pay of arrears of military charges, 228-230.

Decided disapproval of a limited guarantee, as well as of unlimited guarantees, 233.—Unsatisfactory results in the case of the Orissa Canal, though not guaranteed; compensation paid to the secretary and other officers of the company, 234-238.—Unsatisfactory results also in the case of the Madras Irrigation Company, 239, 240.

Statement respecting the operations of the Nerbudda Coal and Iron Company, belief that the company did not undertake any obligation to work the iron, 241.—Obligation upon the Government as to taking over the Calcutta and South Eastern Railway, after having paid a great deal of money under the guarantee, 242, 243.—Belief that

Strachey, General R, R E, C.S.J., F.R S (Analysis of his Evidence)—continued

that in no instance has there been a syndicate as a means of placing the shares of any of the railways in the first instance, 244—Modification of the terms of the South Mahratta contract in order to induce the company to carry out a certain extension of the original scheme, 245, 246—Concession in the case of the Bengal and North Western Company by Government giving up a share of the profits above six per cent., 247.

Very efficient working of the guaranteed railways in times of famine, &c., though the companies have not been liberal in their terms or charges on such occasions, 249-252—Question further considered as to the relative advantages and disadvantages of the action of companies, balance of advantages on the whole, 253-264—Further approval of the principle in the case of the South Mahratta Company, whereby the Government is the owner of the line and regulates the rates, the company acting as agents for working the line, 253, 254-374—Disappointment to the syndicate who took up the shares in the Nizami's railways, which are still at a considerable discount, 255.

Respects in which there is on the whole an advantage on the score of staff in favour of companies as compared with the State, 256-258—Enormous and multilarious duties discharged by the Government of India, so that it may well be relieved of the detailed administration of the railway system, 258-264. 372

Explanation that witness does not approve, at present, of the raising of loans by the Provincial Governments for the construction of railways, though the administration might be placed in their hands together with the financial responsibility for working the lines, 265, 266

Facility, even in the time of the Mutiny, with which loans have been raised in England, including the money required for the guaranteed companies, 267-271—Effect of the extension of railways in inducing more widespread cultivation, and in increasing the obligation to take effectual steps for the relief of famine, 275-278

Reiteration of objections to the system of guarantees, as involving an undue charge upon the taxpayers of India, 279-283—Necessity of some contribution from the revenues of India in order to obtain capital for railway extension, the question being as to the most efficient method, 283-287—Prospect of satisfactory progress if the matter had been left to the Secretary of State and the Government of India, 284, 285.

Necessity of a further guarantee in the case of any company exhausting the amount of capital first guaranteed, 286—Very poor district served by a portion of the South Mahratta line, 288—Success of the arrangements for obtaining capital for this line, though the shares have been at a discount through the smallness of the guarantee, complicated character of the arrangements, 292-294.

Belief that there has been no check to the expansion of traffic from the adoption of the narrow gauge, 295-298—Great improbability of any through-goods traffic between Bombay and Calcutta, 299—Advantage if the narrow-gauge lines were grouped together so as to avoid break of gauge, 300, 301—Estimate that the cost of break of gauge is not greater than the cost of ten miles of transport, exceedingly small addition thereby to the cost or price of grain, 302, 303-342.

Inducement to extravagance by the guarantee on the East Indian Company's capital after the shares had reached a premium, though witness considers this is the best managed line in the world, 304—Strict Government supervision over the expenditure on the South Mahratta line, 305-307—Difficulty at first in organising any proper supervision over the construction of the East Indian Railway, efficient Government officers now available for this purpose, 308—Probability that the Government might have succeeded in borrowing on better terms than the East Indian Company, 309, 310

Entire absence of analogy between India and the United States as regards railways, their construction and extension, 311-313—Satisfaction expressed with the companies' management generally in India, there being, moreover, an efficient Government audit of all expenditure, 314-316

Explanation that witness fully approves of the rapid construction of some 5,000 miles of new railways, but always with due reference to the financial resources of the country, 317 *et seq*—He further submits that the surplus of a million from the railways should be regarded as available for the obligations and contingencies generally which may arise, and should not be allocated specially or exclusively to railway extension, 321-335.

Strong advocacy of railway extension as a means of developing the resources of India, and of increasing the prosperity of the country, it being expedient, however, to limit the amount of borrowed money to the general condition of the finances, 322-340—Good prospect of new lines being remunerative, though some years are necessary for their profitable development, 322-325—Liability to fluctuation in the annual surplus, so that a million a year cannot always be depended upon, 326-333

Inconvenience as well as expense entailed by break of gauge, it being, however, expedient to continue for some time to come both the metre gauge and the 5 ft. 6 gauge, 341-345—Explanation that though witness strongly objects to a limited guarantee, or

Strachey, General R., R.E., C S I., F.R.S. (Analysis of his Evidence)—continued.

any system of guaranteed interest, he approves of interest on capital under such limitations as in the case of the South Mahratta Company, 346-351

Expectation that the exports from India will assuredly increase, and will admit of increased remittances from India in payment of interest on English capital invested in railways, 352 — Great stimulation of the trade of India by railway extension, 353 — Effect of the railways in increasing the product of the soil, but not in directly enhancing the amount of the land revenue, 353-355.

Estimate by witness that the saving to the people of India from the construction of railways is probably twice the gross income of the companies, 355 — Probable saving of from 30,000,000 *l* or 40,000,000 *l*. by the people yearly, the cost of transport having been reduced by at least one-third, *ib*.

Further statement in deprecation of specific recommendations and restrictions, as laid down by the Committee of 1879, though witness does not object to general recommendations of a restraining character, where no hard-and-fast line is laid down, 356-365 367 — Exception further taken to the restraint imposed by the Secretary of State upon the Government of India, approval of the responsibility of acting upon general recommendations being thrown upon them jointly, 356-362.

Importance further attached to exceedingly cautious action in undertaking costly public works in India, 366, 367 — Opinion that no other means than the extension of railways will so effectually prevent loss of life in famines, though it is doubtful whether the cost of relief will be lessened, 368-371.

Further reference to the advantage, on the whole, of administration by companies instead of by the Government, 372-374 — Illustration in the case of the South Mahratta line of the value of construction by the company rather than by the State, 374.

[Second Examination] — Refusal of the Secretary of State to accept the offer of the Great Indian Peninsula Company to construct the Bhopal line upon the condition of a guarantee, on account of the liability involved, 1042-1046 — Negotiations with the company, subsequently, for the construction of the Bhopal line, without a guarantee; eventual suspension of the negotiations through the company declining to undertake the line without a guarantee, 1047-1052.

Evidence to the effect that the present surplus profit of a million a year in excess of the guaranteed interest is but nominal, inasmuch as it is lost to Government by the loss on exchange in connection with railway remittances, 1053-1064, 1185 — Further expression of the opinion that the surplus of one million, as in 1883, does not justify increased borrowing for railways, 1063 1065 — Fluctuation in the profits from year to year, the surplus in 1883 having arisen in an extremely favourable year, 1065-1074 — Very large falling off in the receipts of the Great Indian Peninsula line in the first few months of 1884, doubt whether there has been any reduction in the cost of maintenance, 1065-1067.

Statement in further approval of a total annual expenditure by Government of three-and-a-half millions of borrowed money in the extension of railway and irrigation works, but not as interest on a large capital expenditure to a much greater amount, 1075 *et seq* — Grounds for strongly objecting to the use of two-and-a-half millions as annual interest for providing an immediate capital outlay of about 62,000,000 *l*. by private companies, 1079-1115.

Further protest against any return to the old system of guarantee, as involving extravagance in construction, as well as extravagant terms of purchase by Government, whilst the companies are under no risk whatever, 1096-1100.

Disadvantage in the required railways being constructed by the State on account of the large increase thereby to the debt of India, 1101-1108, 1126 — Suggestion that the necessary extension may be partly effected through private companies who should provide the capital, receiving a moderate rate of interest and a portion of the receipts, the expenditure being under the control of the Government, and the lines being worked by the companies, 1102, 1103 1109 *et seq*

Impracticability of limiting the capital outlay to a specific sum in respect of which the Government should be liable for interest or guarantee, 1136 — Proposal that the companies should be in the light of paid agents of the Government, the construction being effected through them, 1137, 1138 — Approval of private enterprise, pure and simple, great improbability, however, of this being sufficient in lieu of the loss on exchange, 1139-1141, 1196.

Favourable opinion as regards the arrangement whereby the capital for a short line in the north-west has been provided equally by Government and by shareholders, the latter receiving four per cent. interest, the management resting with Government, 1142-1152 — Doubt as to any serious difficulty having arisen in the foregoing case either as regards management or rates, 1149-1152 — Absence of any practical control of the rates by Government where a maximum has already been fixed, 1152.

Further

Report, 1884—continued.

Strachey, General R., R.E., C.S.I., F.R.S. (Analysis of his Evidence)—continued.

Further consideration of the cost and delay involved by break of gauge, the actual cost of transfer being computed as about equivalent to ten extra miles, 1153-1178—Explanation that in calculating the net earnings and the surplus profits, arrears of interest in former years are not taken into account, amount of such arrears, these not constituting any present charge upon the finances, 1179-1184.

Success of the railways, not only in improving the condition of the people of India, but in conferring enormous advantages generally, without creating an increasing charge on the revenues of the country, 1180, 1187, 1194, 1195—Occupation of the principal trade routes by the existing lines; varying conditions as to population, &c, by which the extensions or connecting lines in different districts should be settled, 1188-1190—Limited extent to which there should be Government control over the administration by private companies, degree of restriction desirable as regards rates, 1191, 1192.

Expediency of a reasonable power in Government to come in and buy up the lines made by private enterprise, a fair value being given for the property, 1192—Approval of the ultimate authority still resting with the Secretary of State as regards questions of railway extension, purchase, &c., 1193—Further statement as to speculators being likely in the first instance to take up stock in new undertakings, issued under certain conditions, in the expectation of investors coming in subsequently; instance in the case of the Nizam's railway, 1196-1206

Statement as to it never having been attempted to bring out a rupee loan in England, 1207-1209—Increased remittances from India with increased investment of English capital; effect, on the other hand, of increased exports from India in causing increased remittances to India, 1210-1212—Enhanced financial difficulties if the system of guarantee had been continued; important effect as regards the exchange, 1213-1219

Facility from the railways in the movement of troops, doubt, however, whether the existing force in India admits of diminution even if the lines were much extended, 1220-1222—Dissent from the view that after allowing for loss on exchange and other matters there is a net return of four per cent., 1223-1226—Efficiency of the Government military engineers employed in working the lines; separate establishment kept up specially for India, 1227-1229—Assertion that the cost of working is not greater in the case of the State lines than of the older lines, 1228

Estimate of from 8,000 l. to 9,000 l. as the present cost of making a broad-gauge line, the cost of a metre-gauge line being from 5,000 l. to 7,000 l.; much greater cost of the older lines, 1230-1238—Explanation respecting the cost in the case of the Bengal Central line, 1232-1237.

Question further considered as to the expediency of the limit of 2,500,000 l. a year, as laid down by the Select Committee of 1879, for expenditure on public works, respects in which open to objection, 1239-1248—Circumstance of witness when in India having been considered extravagant in his ideas respecting public works, whereas he is now looked upon by many as an obstacle in the way of progress, 1249, 1250.

Strategical Lines. See Military Lines. Quetta Railway.

Subsidized Railways Statement showing the expenditure and estimated expenditure in respect of the several subsidized lines since 1881-82, *App.* 722.

Sugar Very remunerative results from sugar cultivation, the soil being highly manured, *Sir J. Caird* 611-613

Sukkur Bridge Great importance of completing the construction of the Sukkur Bridge over the Indus, which has been stopped for want of funds, opinion that this is a work which would pay itself in a very short time, *Graham* 2740, 2781-2787.

Sullivan, H. E. Minute by Mr Sullivan in January 1884, as a member of the Famine Commission, relative to the protective character of certain lines; importance attached to their rapid construction, *App.* 580, 581.

Surat. Impossibility of making an efficient port at Surat on account of the large size of the vessels of the present day, *Crawford* 3744.

Surplus Revenue (Railways, &c). See *Expenditure (Railways).* *Financial Condition of India.* *Financial Results of Railways.*

Syndicates Belief that in no instance has there been a syndicate as a means of placing the shares of any of the railways in the first instance, *Strachey* 244.

Statement that the only possibility of getting railway shares taken up in India is through a syndicate, *Conway-Gordon* 3587.

T.

Tadpatri District. Statement showing the area, population, and loss of population during the famine in this district, *App* 587.

TAXATION:

Grounds for the conclusion that the increased expenditure, as proposed for railways, will not add to the burden of taxation of the people of India, contention that the principle should be that the State expenditure on new works should be so carried out as to avoid any increase of taxation, *Conway-Gordon* 3526, 3527, 3539-3557, 3561, 3562, 3570, 3620, 3625, 3626.—Opinion expressed by the Government of India that they would consider increased taxation as a greater evil than slow progress in railway construction, *ib* 3526.

Belief that there is no country which bears such burdens in improving itself as India; heavy taxation borne at the present time for the benefit of generations to come, *Conway-Gordon*, 3609, 3610.

Determination of the Government that there is to be no increased taxation for the purpose of obtaining money for the extension of railways; statement also that the borrowing for this purpose is not to be pushed so as to injure the credit of the Government, *Conway-Gordon* 4070-4074, 4262.—Recommendation that the Government should be allowed to borrow money for the construction of railways, on the condition that no further taxation is imposed on the country, *ib*, 4288.

Condition that it is the gradual improvement in the public works finances which has placed the Government of India of late years in so sound a financial position, removal by the Government of nearly the whole of the customs duties, and considerable reduction in the salt tax, *Conway-Gordon* 4396.—Great importance in laying down definite principles on the question of gauge, a limitation of expenditure being insisted on so as to exclude additional taxation, *ib*, 4695-4701, 4731, 4732.

Determination of the Government of India not to increase the taxes of the country in connection with the extension of the railways, view that delay in the construction of the proposed lines would be a less evil than an increase of taxation, *Westland* 4970, 4971, 4973-4978.—Conclusion that the effect of the present proposals for railway extension will be to render it extremely difficult for the Government to take up any question involving the remission of any existing revenue, *ib* 5127, 5128, 5130.

Further and strong opinion with regard to the present proposals, that the burden on the taxpayer should, under no conditions, be increased, *Conway-Gordon* 5523, 5609.

Statement that the necessity for increased taxation in the future depends altogether upon the question of railway receipts in future years, *Waterfield* 6241-6244.—Decided opinion that under no circumstances should there be fresh taxation for the purpose of extending railways more rapidly than they are now being constructed, *ib* 6279-6281.

Expediency that any future expenditure upon railways should not in any way involve increased taxation; belief that there are no districts in India where increased taxation can be borne by the people, *Danvers* 6872, 7005, 7023, 7024, 7038, 7071.

Concurrence of evidence to the effect that the proposed railway extensions shall not involve any new taxation, *Rep.* ix.

The Committee emphatically endorse the declaration of the Government of India (made through Major Conway-Gordon and Mr Westland), that the proposed extension of railways should not involve additional taxation, *Rep.* xii.

See also *Financial Condition of India. Land Revenue.*

Third-class Fares. Probable increase of expenditure for rolling stock if the third-class fares were reduced, on account of the increased traffic, *Crawford* 3793-3796, 3819-3822, 3850, 3856.

Strong opinion expressed by Lord Mayo, when Viceroy, against maintaining the maximum fare for third-class passengers, *Conway-Gordon* 4317.

See also *Rates and Fares*

Thompson, Honourable Rivers. Minute by Mr Rivers Thompson, dated 26th July 1881, submitting his views upon the subject of the extension of railways in connection with the question of expenditure, *App.* 495-497.

Timber. Increased export of valuable timber in the Central Provinces anticipated by means of the Nagpur-Bengal line, *Hunter* 7149, 7150.

Tinnevely-Treovandrum-Quilon Railway (Madras). Length and cost of this project, as proposed by the Government of India to be left to private enterprise, *App.* 531.

Tirhoot

Turkoot Railway Particulars respecting the several extensions proposed, or under construction, *App.* 535.

Statement showing for each year the mileage, average age, cost, and general results of working, *App.* 776, 777.

Statistics of the cost of working under different heads, *App.* 798 *et seq.*

Trade Great stimulation of the trade of India by railway extension, *Strachey* 353—Grounds for the opinion that directly a line is opened the revenue of the country is increased in proportion, contention that in India the railway makes the country, not as in England, where the country makes the railway, *Glover* 1890-1898 1945 1954-2071-2073 2167-2174 2243

Evidence as to the benefit which would result to India from a further extension of railways, details illustrating the great increase in the Indian trade of late years since the introduction of railways, *Lord* 2461, 2462 2494 2532, 2533.

Desire on the part of the commercial community of India that lines should be made for commercial purposes, and shall be no burden to the country, *Birkmyre* 3413-3416—Increase of traffic and trade when a railway is extended into any district, *Ashburner* 6421-6425

Proceedings of the general meeting of the Bombay Chamber, held on the 11th February 1884, views of different members strongly in favour of a large and rapid extension of railways throughout India in the interests of trade, *App.* 608-619.

Reference to certain evidence in favour of railway extension, with a view to the development of the internal trade of India, and to the equalisation of prices, *Rep.* vii

See also *Coal Cotton. Cultivation of the Soil. Exports. Prices. Traffic. Wheat.*

TRAFFIC:

Importance of reduction of railway rates as leading to a material increase of traffic, *Bythell* 2628-2630 2636 2685-2687—Opinion that private companies are preferred by the people of India to the Government lines in regard to traffic arrangements, *Birkmyre* 3462-3464—Belief that the only means of affecting the current of traffic one way or another would be by means of advertisements, *Crawford* 3876.

General increase in traffic in consequence of reduction of rates, *Conway-Gordon* 4322, 4323—Comparison of the tonnage of general merchandise carried by the guaranteed railways in 1868 with that carried in 1882, *ib.* 4332

Statement that the opinion of the Chambers of Commerce in regard to the estimates of probable traffic on the Indus Valley and on the Rajpootana lines were more correct than those of the officials, *Conway-Gordon* 4594—Expected increase of traffic on the lines generally, *ib.* 5456-5459 6718.

Conclusion that whenever railways are extended into a district they bring traffic with them, *Ashburner* 6421-6425—Striking feature in the history of railway enterprise in India that the actual traffic on the great lines has invariably surpassed the official estimates, admission, however, that in the Madras Presidency there are some railways which have not paid, *Hunter* 7203, 7204. 7325-7328

Average traffic passing over each mile daily in 1882, distinguishing between passengers and goods, and between broad-gauge lines and narrow-gauge lines, *App.* 651, 652.

Comparison between the East Indian, the Great Indian Peninsula, the Rajpootana-Malwa, and the Bombay, Baroda, and Central Indian Railways, in 1883, and in other years when the traffic on the other lines approximated to that of the Rajpootana-Malwa in 1883, *App.* 653

Statement showing for each year since 1858 the net traffic receipts, less moiety of surplus profits paid to companies, *App.* 750.

Statement showing the annual gross earnings of each railway in India from the commencement, also the earnings per mile per week, *App.* 770-781.

Abstract statistics respecting passenger traffic and goods traffic, and the cost of working, under different heads, *App.* 798 *et seq.*

Abstract statistics of the carrying capacity of each line in respect of coaching traffic for each half year from 31st December 1880 to 30th June 1883, *App.* 810-815.

Abstract statistics of the carrying capacity of each line as regards goods traffic in each half year from 31st December 1880 to 30th June 1883; *App.* 816-821.

Abstract statistics of traffic expenses in proportion to traffic earnings in each half year from that ending 30th June 1881 to that ending 30th June 1883; *App.* 822-833.

Gross traffic receipts of the State lines in each year since 1873-74; *App.* 852.

TRAFFIC—continued.

Suggestions in Paper by Major Conway-Gordon as to the data to be borne in mind in considering the estimates of traffic on new lines, *App.* 853, 854.

Sundry details supplied by Major Conway-Gordon upon the subject of gauge, population, traffic, &c., in the case of various lines advocated by the Provincial Governments and the Government of India, at an estimated expenditure of 28,262,450 *l.*, *App.* 853 *et seq.*

See also *Financial Results of Railways. Gauge. Goods Traffic. Passengers Rates and Fares. Wheat.*

Training College (Engineers). Approval of the policy of a training college for the education of young men as engineers, Government having the advantage of their services at a moderate remuneration, *Dickens* 3287-3289

See also *Cooper's Hill Engineering College. Poona College.*

Transit Duties. Belief that the exactions by native chiefs in the way of customs and transit duties are being generally reduced, *Bythell* 2664-2666 — Endeavours on the part of the municipalities throughout India to levy transit dues for municipal purposes until stopped by the Government, *ib.* 2665, 2666.

Considerable complaints made by native merchants in regard to the exactions by native chiefs in the shape of customs or octroi duties, *Graham* 2782-2791 — Importance of railway extension as a means of preventing the exactions by native chiefs in respect of customs and transit duties, *Ashburner* 6448, 6449. 6466-6469.

Treor, Major General, J S, C S. I., R E. (Analysis of his Evidence.)—Long connection of witness with Indian railways, he is at the present time a director in England of several railway companies, 1560. 1671.

Evidence generally as to the respective positions of the guaranteed railways and of the State railways in India, grounds for the conclusion that the mode of guaranteeing which is adopted is an expensive system of promoting construction, 1561, 1562. 1569. 1572. 1596-1604. 1606. 1652-1654. 1657. 1665-1668. 1692-1695. 1696-1725. 1732-1738. 1747. 1810—Statement that as a rule the guaranteed companies are the possessors of the great trunk lines, and the feeders only are in the possession of the Government, with the exception of the Burmah State Railway, 1562, 1562.

Views of witness on the question of the relative merits of the broad and narrow gauge; strong objection to a break of gauge even in the case of a very short feeder, 1563-1568. 1811-1818—Non-objection to railways on the metre gauge in the South Mahratta country, 1568 — Distinct advantage of the metre gauge in Burmah, and also in Northern Bengal, 1568.

Statement that the Government have needlessly discouraged companies that desired to construct feeders to their respective systems, contention that the companies should be encouraged to construct any extension of their lines which they think fit, 1569-1575. 1585-1587. 1605. 1620-1634. 1759-1762. 1777—Extension of the Scinde, Panjaub, and Delhi Railway by means of debentures, because of the refusal of Government to sanction the construction from guaranteed funds, 1571-1574.

Impossibility of developing any large railway undertakings from the resources of the Government of late years, 1576, 1577—Great caution necessary if the expenditure upon railways is to be largely increased; inexpediency of a very large or a very sudden increase of expenditure, 1580-1582. 1607-1611. 1793.

Statement as to the lines most necessary to be constructed, and most likely to be taken up by private enterprise, opinion that there are not many productive lines which have not already been taken up, 1583, 1584. 1613-1619. 1635-1649. 1800—Importance of the Chittagong line, with an extension to Assam, 1583—Suggestions as to the mode which should be adopted by the Government to induce private companies to take up the construction of branches; impossibility of laying down any hard-and-fast line in regard to such construction, 1585-1587.

Grounds for advocating the eventual purchase of the railways by the State after a term of years; statement that the value of Indian railway property is increasing every year, and that in the future higher prices must be paid for their acquisition, 1583. 1692, 1693. 1748-1758. 1763-1771.

Examination as to the amount of control which should be exercised by the Government over the guaranteed companies; importance of the Government having power to bind companies to carry grain to famine districts at a low rate, 1589-1591. 1661-1664 — Opinion that the Government have now an experienced staff of railway officials, and that the State lines are equally well managed with those of the guaranteed companies, 1592-1604—Importance that the lines which are feeders of systems should be managed as part of such systems, 1592.

Desirability of constructing a line from Bhopal to Cawnpur, and Jhansi; belief that such a railway, though not a trunk line, would be about the most profitable that could be

Trevor, Major General, J. S., C.S.I., R.E. (Analysis of his Evidence)—continued.

be made, 1635—Disapproval of the construction of a line from Bombay to Calcutta, 1647—Expediency of extending the railway from Nagpur to Bilaspur towards the Chatusgarh district, 1647—Necessity of the Bundelkund Railway for the purpose of saving that country from famine, 1649.

Very great advantages in the lines being made by the Government; cheap rate at which the Government can obtain money if they make the railways themselves, 1659, 1660—Opinion that the result of borrowing five or six millions annually in the London market would be injurious to the credit of the Government, 1669, 1670. 1772-1776. 1801-1804

Information respecting the general position of the Bengal and North Western Company, of which witness is a director, explanation as to the terms on which the Government have power to purchase the line, 1671-1679 1715-1725. 1808, 1809—Statement that the difference of cost of narrow and broad gauge lines is between 1,500 l. and 2,000 l per mile, slight difference in the cost of the bridges in respect of both gauges, 1680-1683.

Examination with reference to the relative cost of working the railways upon the broad and narrow gauge, running charges, with the exception of coal, almost double on the metre gauge to what they are on the broad gauge, 1684-1687. 1784-1789—Slower rate of speed on the metre gauge than on the broad gauge; the latter lines run at a speed of twenty-three miles an hour, whilst the metre gauge running is from eighteen to twenty miles, 1681-1691.

Information as to the terms of the Government guarantee to the South Mahratta Company; unique character of the contract with this company, 1696-1714. 1725. 1732-1738—Explanation with regard to passenger traffic in India, that a heavy loss is made on the first class, no profit on the second, and all the profit on the third, 1726-1731.

Statement that the cost of maintaining the narrow gauge is greater in proportion to the traffic than the maintenance of the broad gauge, 1739-1746—Explanation that the carriages are a good deal wider in proportion to the metre gauge than the broad, the overhang of the metre gauge carriages increases the tendency to accident as well as to wear and tear, 1745.

Anticipation that when the feeder lines are better developed the financial results of Indian railways, taken as a whole, will be better than they have been in the past, 1789, 1790—Probability that some of the new lines undertaken by the Government will not pay, which fact must be faced in the interests of the country, assertion, on the other hand, that other lines may be built very freely as feeders, upon which good returns are certain, 1793

Contention that the only means of feeding the people when a famine occurs is by a great extension of the railway system in the shape of protective lines, opinion that it is a question of years to carry out such a policy, it being possible only to do it by degrees, 1794-1798—Admission that if the Indian Government embarked very largely in the construction of non-remunerative lines it would materially affect the construction of remunerative lines by private companies, 1799, 1800.

Statement that the Burmah and the North Bengal Railways are earning considerably more than the four per cent. which has to be paid on the money borrowed for their construction, 1805—Possibility of putting a third rail on any of the standard gauge lines, for the purpose of running metre gauge trams; great objection to this course as it would have the effect of reducing the present carrying powers of the railways, 1811-1813

Explanation as to the grounds for constructing the line from Mankpur to Jhansi on the metre gauge, 1818-1822—Conclusion that the proposal of the Government of India to spend fifty millions sterling in four or five years is unreasonable, and that the full benefit of the expenditure will never be obtained, 1826.

Trunk Lines Statement that as a rule the guaranteed companies are the possessors of the great trunk lines, and the feeders only are in the possession of the Government, with the exception of the Burmah State Railway, *Trevor* 1561, 1562.

Strong opinion that all that is required is to develop and extend the trunk lines already made, there is not room, physically, for another trunk line into Bombay, *Crawford* 3664. 3744 4019-4021.

U.

Umballa to Pattala. Refusal of the Punjab Government to accept financial responsibility for a line from Umballa to Pattala, belief that if made there would not be much traffic upon it, *Conway-Gordon* 5399.

United States Entire absence of analogy between India and the United States as regards railways, their construction and extension, *Strachey* 311-313

System of grants of lands to companies in the United States in order to facilitate their raising capital for the lines, *Sir J. Caird* 391, 392—². Details respecting the great development of railways in the United States, notwithstanding the sparse population in some districts, *ib.* 414-418.

Examination as to the relative conditions of India and of America in respect of traffic, population, &c., with reference to the question of railway extension in each country by means of private enterprise, *Sir J. Caird* 478-484. 531, 532.

Further consideration of the advantages of private enterprise in America, witness fully approving of construction and working by companies in India if it were practicable, *Sir J. Caird* 699-706—Probable causes of the low railway rates in America, notwithstanding the dear labour used in construction, *ib.* 646—Much less financial risk attending railway extension in America than in India, *ib.* 585-587.

Statement that America, with a much more sparse population, is far ahead of India in regard to railways. *Birkmyre* 3418. 3453-3455.

Vizagapatam-Raipur Railway. Great value of a line *via* Vizagapatam from Calcutta to Madras, *Sir J. Caird* 590—Reasons for considering it highly important that a line for famine purposes should be made from Vizagapatam to Raipur, *Bythell* 2614.

Advantage of the proposed Vizagapatam-Raipur line as enabling the Orissa coast, in case of famine, to be fed from the grain tracts of Chattisgarh, *Westland* 4899-4906.

Opinion that the line from Raipur to Vizagapatam will not be a paying line, on account of the inferiority of the latter port; statement on the other hand by the Collector of the Godavery district that this is the most promising scheme which has been proposed for the south of India, *Conway-Gordon* 5369, 5370. 5375 5384-5386. 5390-5394.

Particulars respecting this line, as proposed by the Government of India in January 1833, *App* 524 533

Great value of the proposed line in opening out the Chattisgarh district, large population of this district, *App.* 864-868.

Documentary evidence, and extracts from official correspondence, respecting the proposed construction of this line, and its advantages, sanction not yet given by the Secretary of State, *App.* 862-869. 920.

Wages. Improved wages and improved condition of the people consequent on the railways, *Chapman* 802-806 876-878. 903-905—Great importance of the extension of railways in the effect upon the labour market in India; belief that in many instances the wages would be doubled, *Glover* 1895, 1896. 1910-1922. 1932-1943 1955-1961. 1996-1999. 2002-2008—Opinion that if the Government continue to spend only four millions a year the price of labour will not be much increased, *ib.* 1918, 1919.

Statement that the daily wages of coolies in the villages of Bilaspur is as low as 1½ d per day, *Birkmyre* 3411, 3412 3476—Increased cost of labour in consequence of the railways, *Westland* 4951-4955.

Concurrence of evidence as to the very beneficial operation of railways with respect to the condition of the people and the rise in wages, *Rep.* viii.

Waggons. Proposal at the present time that on the East Indian line the American bogey waggon shall be substituted for the ordinary waggon, with the object of reducing the dead weight on the broad gauge, *Rendel* 5715, 5716

See also *Engines and Rolling Stock.*

Wardha Coal. Bad character of the Wardha coal; opinion that as far as this coal is concerned the Hyderabad Railway is not very much needed, *Rendel* 6013-6018.

Wardha

Report, 1884—continued.

Wardha Coal Railway Statement showing for each year the mileage, average age, cost, and general results of working, *App* 779.

Warora-Chanda Railway Length and cost of this project as proposed by the Government of India to be left to private enterprise, *App* 530

Documentary evidence submitted by Major Conway-Gordon showing the views of the Government of India and of the Madras Government in favour of the construction of this line, approval on the part of the Secretary of State, *App* 908-910. 920.

Waste Land Extensive districts of waste land in India capable of cultivation, *Conway-Gordon* 5453 5469-5474.

Waterfield, Henry. (Analysis of his Evidence)—Is Financial Secretary at the India Office, 6029.

Examination as to the origin and progress of the policy of constructing large public works in India by direct agency of the State, by means of borrowed money, 6030 *et seq.* — Proposal in 1868 that extraordinary works should be separated from ordinary expenditure and not included in the figures upon which the annual surplus is calculated; proceedings consequent thereupon, 6030-6045. 6297-6309 — Large scheme proposed by Lord Mayo's Government in 1869 for the extension of public works by loans, amounting to six or eight millions a year for the next ten years, disagreement with this scheme on the part of the Home Government, 6033, 6034

Information generally as to the different proposals put forward in regard to railway extension in India, great stress placed by the Home Government on the importance of economy of construction and the selection of lines which would not involve heavy works, 6035-6040 6309-6311 6313-6318 6324-6334 — Rule laid down by Lord Salisbury in 1874 that all the money required for railways should be raised in India, 6039-6045.

Statement in detail as to the origin of the Famine Insurance Fund; arrangements made by successive Secretaries of State, that part of this fund should be devoted to the construction of protective works and part to the reduction of debt incurred for such construction, 6046-6070. 6113-6116 6120. 6134-6155 6276-6278. 6296 — Special reason for raising the money for famine insurance in India, in order that native capital might be attracted and that the interest of the people should be enlisted in works for their own benefit, 6047, 6048

Action taken in 1891 by the Secretary of State to define the works which were to be considered productive, statistics showing the financial results of the productive works so defined, 6064. 6070. 6112 — Desire of Lord Hartington, when Secretary of State for India, to encourage private enterprise and construction by companies, facilities afforded by the Government with this object, 6064, 6065 6071-6084

Statement of the main provisions in the case of the arrangements made by the Government with the Bengal Central Company, by which a guarantee was given for a limited period, power reserved by the Government to purchase this line after thirty or after fifty years, and if not purchased the line to lapse to the Government after ninety-nine years, 6072-6074 6084 6112 — Numerous schemes put forward by private companies as the result of the agreement made with the Bengal Central Company, 6074, 6075

Proposals made by two private firms to undertake the extension of the Nagpore line to Calcutta, determination of the Government in regard to these proposals not yet arrived at, 6076 6157-6159.

Desire on the part of the Great Indian Peninsula Company to construct a line from Bhopal to Agra and Cawnpore in extension of their main line; postponement of the negotiations, the question being referred by the Government to the present Select Committee, 6077 6156 6273-6275 6282-6288 — Guarantee received by the South Mahratta Company who construct and work the line as agents for the Government, who are the owners, absolute payment of the guarantee to the company in the equivalent of sterling, 6078-6080. 6084

Grounds for adopting the mode of payment to the South Mahratta Company of such a number of rupees as will produce the requisite sterling sum in England, 6079, 6080 — Debentures at 3½ per cent issued for the purpose of raising the money required for the Western Deccan line, 6081 — Grant of land made to the Bengal and North Western Company by the Government, but no direct pecuniary assistance given; power reserved by the Government to purchase this line after thirty or after fifty years, 6082-6084, 6283. 6288.

Information as to the main points of difference between the Government of India and the Secretary of State in relation to the proposal of the Government in 1883 regarding the construction of railways, desire on the part of the Indian Government for a large extension of operations, to which the Secretary of State does not assent, 6085, 6086 — Comparison of the proposed outlay on public works with the actual outlay in past years, 6087 — Sources from which the money laid out on canals and railways during the past five years has been supplied, 6088.

Waterfield, Henry. (Analysis of his Evidence)—continued.

Examination as to the mode intended to be adopted by the Government of India in order to raise money for the proposed works during the next five years; thirty millions sterling to be borrowed in the open market during this period, 6089-6098, 6104, 6105, 6117-6119, 6121-6130, 6132, 6133, 6180-6170, 6184-6192—Proposal of the Indian Government to spend during the next five years on canals and railways thirty-eight millions sterling as compared with thirty millions in the preceding period of five years, amount to be spent on irrigation and railways, respectively, 6089

Absence of restriction on the Government of India as regards the amount to be borrowed in India; in England the power to borrow is strictly limited by Parliament to a specified amount, 6091, 6095—Statement as to the increase of the rupee debt since 1813, one-fourth of the rupee securities held by natives and three-fourths by Europeans, 6093.

Necessity of obtaining an Act of Parliament if it be intended to adopt a system of borrowing in England, unwillingness hitherto on the part of Parliament to entrust large borrowing powers to the Home Government, 6097, 6098—Large increase in the amount of remittances to England since the year 1868-69, decided opinion that these remittances tend to prevent the rupee rising in value, 6099-6104, 6201-6203, 6240

Causes which have led of late years to the depreciation of silver, considerable diminution in export of silver from America within the past few years, 6100, 6101, 6176-6178, 6254-6259—Assertion that the construction of public works from borrowed money, if raised in India, will be an unmixed good, belief, however, that directly the money has to be procured from abroad an element of danger comes in, 6104, 6221.

Expediency of obtaining foreign capital sparingly and equally, contention that sudden expansions are more wasteful than sudden reductions, 6104, 6191-6195, 6245-6248, 6266—Suggestions with reference to making such additions to the Finance Accounts as will show the real result to the Government of the railway transactions of the year, impossibility of showing distinctly the question of exchange in the accounts, 6106-6111, 6131.

Fluctuations in price of the 4 per cent. rupee securities since 1861, when they were at 71; price of these securities unduly high in recent years owing to exceptional circumstances, 6117—Explanation as to the saving by borrowing in England if exchange were to remain unaltered, impossibility for various reasons of laying down a precise rule as to the line to be drawn between borrowing in India and in England, 6118, 6119

Average annual amount of 22,000 l. spent in the last three years upon actual relief of famine; total of 67,000 l., 6145-6147—Statement that the policy of the Famine Fund is not to endeavour to pay off the past, but to avoid the incurring of future debt, if the protective works answer the purpose of reducing the expenditure in the case of a future famine, this result will be gained, 6150-6155.

Law recently passed by the Bengal Council to enable the Calcutta Port Trust to borrow in London, which previously it had not been possible to do, explanation that this is merely a permissive law which enables such bodies to borrow in the London market if the Home Government approve, 6167-6170—Undertakings upon which it is proposed to spend four or five millions by the Port Trust and the municipality of Calcutta, 6161, 6171.

Explanation as to the mode of accounting for the receipts from protective lines which were made out of revenue and not debited as productive lines, 6179-6183—Approval of making forecasts of expenditure but not of revenue for longer periods than five years, expediency at the same time that the Government should hold itself free to adjust its expenditure to any altered circumstances, 6193-6195, 6218-6220, 6319-6321.

Further examination relative to the mode of raising money for the proposed works; calculation that the saving of borrowing in England as compared with borrowing in India is about a half per cent., 6196-6200, 6221-6239, 6249-6253, 6260-6267, 6289-6295, 6304-6309—Great importance of reducing as much as possible the amount of remittances from India to this country, which at present is as much as India can bear, 6202-6204.

Conclusion that the present financial position of India does not justify any very large addition to the future burden on the revenues; opinion that the proposed expenditure upon railways of thirty-three millions during the next five or six years is not safe, 6207-6217—Admission that the objection to borrowing is minimised if the borrowing takes place in that metal which is used in the currency of the country, 6224.

Impossibility of borrowing in India, even at an extra cost of a half per cent., sufficient money to carry out the proposals of the Indian Government for the next five years, 6226, 6227—Grounds for the opinion that it is unwise for the Government to speculate in regard to the chance of the value of the rupee taking an upward direction, contention that there is greater risk in calculating the future value of silver when paying interest

Waterfield, Henry (Analysis of his Evidence)—*continued.*

interest on certain loans, than there is in paying a high rate down, 6231-6239, 6260-6263.

Statement that the necessity for increased taxation in the future depends altogether upon the question of railway receipts in future years, 6241-6244—Conclusion that the question of putting out a loan in the Indian money market is one merely of price, belief that there is no reason to suppose that money cannot be borrowed in rupees if the amount be not too large, 6251-6253.

Grounds for the opinion that it is not necessary that the proposed railway extensions should be carried out in five or six years; expediency of the work being done steadily, but not so rapidly, 6267-6272—Contention that the works which are to be constructed by appropriating the Famine Fund should be those which are strictly needed for the prevention of the relief of famine, 6278.

Strong feeling that under no circumstances should there be fresh taxation for the purpose of extending railways more rapidly than they are now being constructed, 6279-6281—One reason for caution in regard to expenditure upon railways is that, notwithstanding the care taken in the past to avoid extravagance, the sterling debt has increased within the last fifteen years by twenty-two millions, 6289-6295—Opinion that the expenditure upon the Quetta Railway is large enough to take the whole of the surplus as provided in the Budget, 6295.

Necessity, if the companies do not come forward as anticipated, and if it is essential to construct the lines within the specified period, for the Government of India themselves to borrow over twenty-six millions, belief, however, that they are not prepared to execute the proposed works if so large a proportion falls upon their direct agency, 6300-6311—Explanation of the terms given by the Indian Government under a limited guarantee, as in the case of the Bengal Central Company, 6312.

Waterfield, Mr Tabular statements submitted by Mr. Waterfield containing statistics on various points, *App* 693-699.

Wazirabad-Sialkot Railway Particulars respecting this line, as proposed by the Government of India, in January 1883, *App* 524.

Documentary evidence submitted by Major Conway-Gordon respecting this line, its advantages, estimated cost, &c., sanction by the Secretary of State, *App* 906, 919.

Western Deccan Railway (Poonah to Belgaum). Arrangements made with the Southern Mahatta Company for the construction of this line as a protection against famine, *Waterfield* 4571, *Conway-Gordon* 5375.

Debentures at three-and-a-half per cent. issued for the purpose of raising the money required for the Western Deccan line, *Waterfield* 6081.

Particulars respecting this project, as proposed by the Government of India in letter of 23rd January 1883, *App* 513-525.

Documentary evidence submitted by Major Conway-Gordon respecting this line, its advantages, estimated cost, &c.; sanction given by the Secretary of State, *App* 903-905, 919.

Western Rajputana Railway. Statement showing, for 1879 and 1880, the mileage, average age, cost, and general results of working, *App* 780—Amalgamation of this line with the Rajputana Railway in 1881, *ib*.

Westland, James. (Analysis of his Evidence)—Holds the office of Comptroller and Auditor General to the Government of India, 4743.

Information generally with reference to the famine policy of the Government as far as finances are concerned, proposal in 1878, for the first time, by Sir John Strachey that there should be a surplus, reserved annually, of one and a-half millions for famine insurance, in addition to the half million ordered by the Secretary of State, 4744, 4745.

Calculation made that famine in every ten years would cost fifteen millions, which, by the surplus of one and a-half million annually, would be provided for; determination of the Government of India to invest the surplus annually in productive public works, so as to avoid additional borrowing, 4745.

Direction in 1881 by the Secretary of State that half of the one and a-half million should be actually expended on public works, and half the amount be applied to the reduction of the debt, 4745—Question as to using part of the famine surplus for the payment of interest upon money borrowed for public works, first raised by Lord Lytton's Government in 1879, and negatived by the Secretary of State, grounds upon which the sanction of the Secretary of State was refused, *ib*—Statement that the Estimate by

Westland, James (Analysis of his Evidence)—continued.

the Government of India of one-and-a-half million annually as the cost of famine was excessive, 4745

Explanation with reference to the proposals of the Government of India as to construction of railways since 1881; feeling on the part of the Government that commercial lines must be put aside, and that only lines protective against famine should be taken up, 4749-4763—Adoption by the Government of the Nagpur and Chhattisgarh line, which is to run into a country where there is a large reserve of grain, 4749.

Statement as to the particular lines which are proposed by the Government as protective against famine, different districts in need of protection, 4750, 4761—Conciliated effort of the Government to push on the protective lines with the belief that they will be to a large extent productive, technical meaning of "productive" line that it will pay four per cent. within five years after opening, 4753-4756.

Witness submits that there is no doubt but that nearly every mile of railway in any part of India will pay ultimately, 4755, 4756—Willingness on the part of the Government to give all facilities, short of financial aid, to private enterprise to construct railways, 4757

Recommendations on the subject of the rate of railway progress made to the Government by the Madras and Bombay Chambers of Commerce, 4760-4763—Circumstances of the Bengal merchants having proposed to undertake railways, 4761—Views of the Madras Chamber as to the expediency of pushing on the famine lines with greater speed, 4762—Comment upon the proposal of the Bombay Chamber as to the mode of raising the required capital, *ib*

[Second Examination.]—Further statement explanatory of the views of the Government of India that at present it would be unwise to revert to the system of limited guarantee in regard to new lines which are not indispensable for protection against famine, 4764—Expediency of leaving the Indian Government and the Secretary of State free to deal with each particular case of guarantee to a protective line, 4765, 4972

Opinion that in every case of a permanent guarantee there should be a provision for compulsory purchase by the Government at a price not above a certain maximum, 4768-4770—Great importance that the profits of a line should always be calculated upon a rupee basis, as is done in the case of the South Mahratta Railway, 4771—Desirability that as much as possible of the capital of guaranteed lines should be in the form of debentures, grounds for this opinion, 4771.* 4855-4858. 5022-5027.

Recommendation by the Famine Commission that in the construction of protective lines nothing should be attempted at the first which might divert the available funds from what is strictly essential, 4772—Statement that the Financial Department concurs generally in the proposals of the Public Works Department in regard to railway construction; inexpediency of the Government binding itself to any hard-and-fast programme either as to the particular lines to be made or the order in which they are to be taken up, 4773-4775, 4942-4950 5010-5018—Opinion that the Government has not pledged itself absolutely to the proposed scheme in regard to railways, but has simply expressed conclusions in its favour, 4774, 4775.

Examination with reference to the present financial position of the Government of India; explanation generally as to the method followed by witness when preparing the papers put before the Committee upon this subject, 4776-4784, 4818-4832, 4859-4866, 4876-4878 4931-4940.

Grounds for the statement that the Indian Government is not merely an administrator, but is in some sense a trader, great fluctuation in the opium department, which affects materially the revenue of the Government, 4776—Distinction drawn between Imperial and Provincial finance, which is entirely peculiar to India, *ib*.

Explanation as to the method by which the question of exchange is dealt with in the Finance Papers, arbitrary and artificial sense in which the statement that ten rupees equal 1 £ sterling must be considered in these accounts, 4776—Recovery of the country in 1882 from the disastrous effects of the famine of 1877-78, large amount of import duties remitted, and the salt tax also largely reduced in consequence of the improved state of the revenue, *ib*.

Opinion of the Government that the best use they can make of the growing revenue is to prosecute a scheme of railway construction which has for its object the development of the country and its protection from famine, 4776—Continuous increase during the past five years in the revenue received from State railways, details of the estimated receipts from these lines for the year 1884-85, *ib*.—Net result of the present financial position, that upon the present balance of revenue and expenditure the estimate is a surplus of forty-eight lacs of rupees; inclusion in this estimate of the entire reservation of the famine insurance, *ib*.

Explanation as to the financial results of the present proposals of the Government in regard to railways, calculation that thirty per cent. of the whole amount proposed to be spent

Report, 1884—continued.

Westland, James. (Analysis of his Evidence)—continued.

spent will be paid in sterling in England, and the balance will be the actual expenditure in rupees in India, 4776-4784, 4866-4875, 4960, 4961.—Forecast for ten years prepared by witness, showing the financial effect of the whole of the proposals of the Government, contention that the operations of the first five years are not likely to throw any burden upon future years, 4778 5004.—Statement that the figures prepared by witness represent the question in the most unfavourable light, so as to make the Estimate perfectly safe, 4779-4781 5008, 5009

Information generally with reference to the borrowing operations of the Government, statement that these operations always exhaust for the time the whole resources of the Indian market, 4785-4808 4833-4844 4951, 4956, 4962, 4963, 4979-4990.—Particulars as to the class of people in India who in the first instance take up the loans, instance of a doorkeeper in the bonded warehouse at Calcutta, whose salary was twelve rupees a month, being a large and successful dealer in Government paper, 4786.—Large amount of permanent investment in the Government loans taken up in England, 4787-4790.

Decided opinion that at the present time two-and-a-half crores is too much to throw each year upon the Indian market, 4791.—Explanation as to the cause of the falling off in the loans in the Indian market of late, 4792.—Unsuccessful efforts made in India since 1870 to induce the masses of the people to invest small amounts in Government loans, stock notes for sums varying from 12½ to 100 rupees issued at the treasuries throughout the country, 4793-4795 4841, 4842.—Provincial debentures at 4 and 4½ per cent, in connection with public works, also issued, but not successfully taken up by the people, 4793-4795.

Large amounts deposited by the people in the savings banks, especially in Bombay, where the deposits are growing at the rate of ten lacs a year, post office savings banks lately instituted, which have been successful in attracting the savings of the agricultural class, 4795-4799 4839, 4843, 4844.—Distribution of the Indian debt as held by natives in India, Europeans in India, and the amount encased to London, 4800.

Information as to the net result to the Government in regard to raising loans in sterling in England, as compared with raising them in rupees in India; smaller percentage paid for the loans in England than is paid in India for rupee loans, 4801-4804.—Strong opinion that the Government should be left with free hands as regards borrowing, and that there should be no hard-and-fast rule on the subject, contention that this freedom should apply not only to the place of borrowing but to the limit of the amount, 4805-4807

Suggestions as to improvements in the form of accounts in the event of the Government borrowing in sterling in England; belief that there would not be much difficulty in altering the form of accounts, so as to show the difference between the rupee and the sterling loan, 4808-4812.—Decided opinion that it is less inconvenient to alter the accounts than to show, as at present, transactions far removed from the truth by assuming that the rupee is one-tenth of a pound sterling, 4811, 4812.

Disagreement with Major Conway-Gordon's proposal that the railway and public works accounts should be separated from the general revenue accounts of the Empire; grounds for believing that there would be no advantage in this change, 4813-4817.

Examination as to the claims on India, by the War Office in respect of the non-effective charges of the English army; practical admission of the claim of 2,200,000 £. by the Government of India, which amount it has agreed to pay, 4818-4823 4862-4865.—Admission that the estimates put before the Committee would be very seriously affected if a famine were to occur; belief that such an event would swallow up the annual increase of revenue for a year or two certainly, 4831, 4832.

High rate of interest charged by the ryot when lending money to his neighbours; 37½ per cent, frequently the rate per cent between ryots and local traders, who supply them with seed and help them with their revenue payments, 4837, 4838.

Further information respecting the lines proposed to be taken up by the Government; indication that private enterprise is not prepared without a guarantee from Government to enter upon railway construction, 4845-4854, 4879-4916, 4920-4927.—Negotiations with regard to the Chattisgarh and Nagpur line postponed by the Secretary of State until the Report of the present Committee is received, 4853, 4854.—Capital of 1,700,000 £. raised by the South Mahratta Company, by means of debentures, in the same way as is suggested by witness, 4857, 4858.

Willingness on the part of the Indian Government to permit companies to come and take up any railways they like, so long as a guarantee is not required, 4871-4873.—Statement that witness' own opinion coincides in the main with the instructions which he has received from the Government, 4876, 4877.

Grounds for the opinion that at the present time protective lines should be pushed, in preference to commercial lines; in past times the Government largely took up those lines

Westland, James (Analysis of his Evidence)—continued

which were supposed to be purely productive, 4879-4927. 5019-5021—Impossibility of conveying produce to certain provinces at the present time, if famine were to occur, dominant consideration of the Government, for this reason, that they should be prepared with railways to meet such an emergency, 4883-4887. 4915 4964-4968

Belief that there is no substantial difference between a protective and a productive line in a populous province; explanation that the severest famines occur in the most populous places, 4886-4906 —Opinion that the line between Chhattisgarh and Calcutta will be a paying line, but will in no sense be protective on account of the sparseness of the population, 4891-4898.

Intention that the Vizagapatam-Raipur line will enable the Orissa coast, in case of famine, to be fed from the grain tracts of Chhattisgarh, 4899-4906—Project on hand at the present time to protect the Bundelkund districts by irrigation, large amount of money already spent upon the Betwa Canal, 4917-4919

Opinion that there are many advantages in making over the construction of lines to companies, contention, however, that there is ample room both for the companies and the Government, 4928-4930—Statement that in estimating the surplus available for railway construction the Government have excluded wars, and have assumed that famines are sufficiently provided for, belief that during the last ten years the number of years adversely affected by political accidents was not a large proportion, 4931-4940

Practical impossibility to construct a coast railway from Calcutta to Madras, on account of the cost of bridging the numerous rivers, 4941—Opinion that if the Government were to come into the London market to borrow five millions annually, they would have to pay more than they do at present, 4951

Piece of labour in India sent up by the extension of railway construction, explanation that notwithstanding the increased cost of labour the proposed new railways would not cost nearly as much as the guaranteed lines, 4951-4955—Statement that although separate railway accounts are not published, it is very easy to obtain information as to the result of working from the accounts presented to Parliament, 4957-4959 5006, 5007.

Determination of the Government not to increase the taxation of the country in connection with the extension of the railways, view that delay in the construction of the proposed lines would be a less evil than an increase of taxation, 4970, 4971 4973-4978 —Grounds for the opinion that the liability for the loans should be divided between the Government and the Companies, 4980-4990

Further statement that the land will be given by the Government to any company desiring to take up a line, but beyond this assistance they will not go, 4991-4997—Belief that as regards the present estimates there will be no need for any further invasion of the famine fund for the purposes of guaranteeing railways, 4998-5005

[Third Examination.] Admission that the policy of the Indian Empire has been to spend out the revenue as against capital on railways, 5028-5030—Information with reference to the proper mode of charging loss by exchange in the railway accounts, explanation that this question is a mere matter of account, and that there is loss by exchange upon borrowed money as well as upon remitted money, 5031-5033 5067-5080

Further examination as to the position of railways in regard to the general finances of India, statement that no part of the capital expenditure of productive lines is charged against revenue, 5034-5047 5061-5066 5106-5114 5173-5182 5237-5253 5262-5268 5315-5321—Explanation as to the course adopted in the case of railways upon which the expenditure has been charged to revenue, and which afterwards became productive, 5040-5047 5280-5287—Statement that in the year 1883 there was capital expenditure upon ordinary public works out of revenue to the amount of nearly four millions, 5048, 5049 5254-5261

Consideration of the question of risk as run by the Government in guaranteeing interest on, or in themselves constructing railways in connection with the question of there being a reserve of expenditure, belief that in case of accident the Government would suspend some of the ordinary works so as to continue the construction of the railways, 5050-5060 5098-5105 5183-5185—The net annual revenue of India when there is neither a surplus nor a deficit, amounts to about seventeen millions sterling; the loss by exchange in remitting fourteen millions of this revenue to England amounts to three millions sterling, 5067-5069

Additional examination with reference to the financial results of borrowing in India or in England, argument that there is no saving by borrowing large sums in England, as the difference in cost is a matter of account, and not an actual saving, 5072-5097 5119, 5120 5289-5303 5356-5362—Statement that the difficulty of borrowing in India is increasing, while, on the other hand, the facility of borrowing in London is also increasing, 5087-5090

Report, 1884—continued

Westland, James (Analysis of his Evidence)—continued

Opinion that it is not advisable that the Government should at present retrench its ordinary public works expenditure, so as to divert some of it towards productive purposes, 5104, 5105 — Explanation as to the effect of loss by exchange upon the capital transactions of railways, 5106-5108.

Grounds for the exclusion from the account of the surplus of last year of the payment to the War Office of 1,000,000 *l* on account of non-effective charges, 5115-5118 — Statement that the current payments to the War Office are deduced from what they hitherto have been on account of a change in the method of reckoning them, extra payments beyond this reduced amount to be made so as to pay off the arrears, 5117, 5118.

Further evidence in relation to the proposed expenditure upon railways in the future liability of the Government for an additional expenditure of 1,000,000 *l* for the next five years, 5121-5128 — Conclusion that the effect of the present proposals will be to render it extremely difficult for the Government to take up any question involving the remission of any existing revenue, 5127, 5128-5130.

Question before the Government of India for some time with reference to a reduction of the export duties upon rice in Burmah, which is postponed until the railway policy has been carried out, 5129-5134 — Entire reversal by the proposals of the Government of the productive works policy laid down by the Committee of 1879, 5124-5138.

Further examination with reference to the policy of 1878, of providing an annual famine fund of a million and a-half, in addition to the half million provided by the Secretary of State many years before, belief that this provision retards the natives from making provision for themselves, 5139-5172, 5229-5236, 5269-5279.

Policy laid down in 1881 that half of the famine fund should be devoted to protective works, and the remainder to the reduction of debt, 5145-5153 — The actual expenditure upon famine relief between the years 1873-74 and 1882-83 amounted to 14,700,000 *l*, in conventional sterling, explanation that the total cost of famine has been more on account of the loss to the revenue, 5157, 5158.

Estimate of the Famine Commissioners that the deaths from famine in Madras and Bombay, between 1874 and 1878, amounted to five and a quarter millions in excess of the deaths which would have occurred had the seasons been ordinarily healthy, 5160, 5260, 5270 — Statement that the revenue of India has been sufficient during the past twelve years to provide every rupee which has been spent on famine, 5171, 5172.

Information as to the Indian debt which at the 31st March 1883 amounted to 159,274,000 *l*; the increase of debt between 1871 and 1883 amounted to 59,359,000 *l*; 5177-5179, 5185-5193 — Detailed statement of the extraordinary expenditure of 36,105,000 *l* from 1871 to 1883 charged upon the revenues of India without borrowing, 5181, 5182, 5347-5350.

Belief that if the Government be as fortunate during the next twelve years as they have been in the past twelve years they will be able to meet the whole of the present proposals for railway construction, and have a handsome series of surpluses over, 5183 — Calculation that from 1870 to 1883 the rupee debt in England had increased by 24,000,000 *l*, 5191, 5192.

Examination as to the amounts of Government remittances to England since the year 1868-69, if the Government are to borrow in England, the present proposals will add to the amount of the annual remittances, 5193-5219 — Principal part of the remittances to England made by means of sterling paid to the Secretary of State in respect of demands issued by him upon the Indian Treasuries, the foundation of these remittances is the produce exported from India, 5205, 5206.

Possibility of meeting the demand for remittances to England by reducing the imports, large cotton industry springing up in India, which to some extent will take the place of the present import of piece goods, 5207, 5208, 5351 — Belief that as regards the increase of sterling borrowing in England, the interest on which has to be remitted from India, the exchange will adjust itself, and that although it may do so at a lower rate it will not be a calamity for India, 5215-5219.

Further explanation respecting the proposed change in the accounts, with the object of removing obscurity as to the position of Government in the event of a system of borrowing in England being adopted; absence of any intention to alter the Indian form of account, 5221-5228 — Additional entry suggested so as to charge the exchange upon the amount of sterling borrowed, 5222-5227.

Impossibility of inducing the natives to emigrate to other places so as to avoid the dangers of famine; emigration is utterly alien to the native manner of life, 5233, 5234 — Statement that the expenditure upon works and modern improvements in India amounts to about seven per cent upon the gross revenue, 5259, 5260.

Westland, James. (Analysis of his Evidence)—continued.

Admission that many of the railways charged to capital are not productive in the strict sense of their producing four per cent. within five years; they are, however, productive otherwise than in their restricted sense, 5269-5264.

Statement that the expenditure upon the Madras famine during the three years it continued was 7,804,000 £., as compared with that in Bengal of 6,710,000 £.; 5271. 5275, 5276—Belief that the circumstances and habits of life of the natives of India are not such as would induce them to provide against famine whether the Government assisted them or not, 5272-5274.

Further explanation of the reasons for the difficulty which exists at present in regard to borrowing in India; opinion that the accumulations of money are only in the hands of those natives who follow mercantile pursuits, and that they will not invest in four per cent. loans, 5289-5296—Belief that the native princes who formerly contributed largely to the East India Company's loans are more in debt than able to contribute money; explanation as to the cause of this, 5294-5296.

Statement that formerly the money obtained upon guarantee was raised upon less favourable terms than that borrowed directly by the Government, opinion that this arose from the magnitude of the transactions, 5297, 5298—Grounds for considering it expedient to raise as much as possible in India of the money required for the Government, 5302, 5303.

Further suggestion as to publishing separate accounts showing the exact results of the working of the railways, 5304-5306—Statement that at present the accounts are not available to the public in any form except that of the Railway Administration Report, which it is difficult to comprehend, 5306-5308.

Export taxes entirely remitted in India, with the exception of that on rice, 5309-5314—Argument that although export duty on rice is for the benefit of the whole of India, the natives of Bengal and Bombay get the entire benefit of the trade, 5322-5330.

Additional information as to the method of estimating the surplus over revenue applicable to public works; low estimate in this calculation taken in regard to the opium trade, 5331-5337—Conclusion that in the event of pressure through the railways not paying, the Government would not resort to the raising of the land tax, 5338-5346—Statement that it is impossible suddenly to increase the land revenue receipts, explanation that increase arises partly from land being brought into cultivation, and partly from higher prices and new settlements, 5344-5346.

Opinion that if the annual expenditure upon railways be increased by a million it will not be possible to reduce the export duty on rice, 5354—Possibility that the increase of revenue from the railways in future will enable the Government to remit the duty on rice, 5354, 5355.

[Fourth Examination.]—Tables of statistics prepared by witness for the use of the Committee with regard to the financial position of Indian railways, 5620—Statement that the statistical details of railway expenditure are not immediately procurable but that they can be obtained if necessary by the India Office, *ib.*

[Fifth Examination.]—Further examination respecting the extent to which it would be judicious that a provincial government should have power to construct local railways out of their own funds; suggestions as to the method by which this system could be extended, 7107-7133.

Statement that when any railway is constructed it is charged against ordinary revenue when it is anticipated that it will not be a paying line, 7109-7118—General proviso that provincial governments shall meet out of their revenues any deficit in respect of the working returns of the lines, 7121, 7122.

Grounds for the opinion that the accounts as regards the contracts between the provincial and Imperial Governments in regard to expenditure on railways should be kept separate, 7126—Explanation with reference to the arrangement made with the South Mahratta Company for rupee payment in India equivalent to a sterling payment, approval of paying the interest in England in sterling, 7134, 7134^a.

Westland, Mr. Statistics of Indian railways, as submitted by Mr. Westland, for 1882-83 and 1883-84, *App.* 624.

Paper submitted respecting annual payments of interest on Indian debt since 1870-71, *App.* 623.

Particulars supplied by Mr. Westland relative to the outstanding debt of India on 31st March in each year since 1870, *App.* 623.

Paper submitted by Mr. Westland, dealing with the question of loss or gain, by substituting sterling borrowing for rupee borrowing; correction of misapprehension on various points, *App.* 624-629.

Paper, dated May 1884, showing the present financial position of the Government of India, the revenue and expenditure in respect of railways, &c., *App.* 630-637.

Consideration by Mr. Westland of the financial results of the proposals of the Government of India as regards railway extension; conclusion that a considerable margin exists after undertaking the whole of the proposed lines, *App.* 640-645.

WHEAT:

WHEAT—continued.3. *Extent of Cultivation, and of Export hitherto*—continued.

deney being a large wheat-producing country, with the exception of the coast districts, *Ashburner 6529-6533*—Belief that the development of the wheat trade would not have been so extensive had it not been for the low exchange, *Robertson 6666*.

Tabular statement showing the exports of wheat from India to different countries in each year from 1871-72 to 1882-83, inclusive, *App 766*.

Statement of the annual imports of wheat into *England* from different countries and from India in each of the years 1875-83; *App 767*

Tabular statement showing the annual exports, in quantity and value, of Indian wheat from each province from 1866-67 to 1882-83, *App 782*.

4. *Prospect of Increased Cultivation and Export as a Result of Railway Extension*

Witness is not so sanguine as many people about the increased produce and export of wheat, very favourable seasons in recent years, which cannot be relied upon to continue, *Sir J Caird 413 457-477. 533-540*—Increase of the population at a rate sufficient in two years to absorb the annual export of wheat, *ib 413 494-496*

Improbability of successful wheat export to England^{at} the present prices, *Sir J Caird 469, 470*—Effect of increased prices in inducing increased cultivation of wheat whilst an extension of railways would also tend to increase the production and the export, *ib 517-529 533-540 563*

Doubt as to wheat being produced to such an extent as to exhaust the soil, power of applying manure if there be increased cultivation through higher prices, *Sir J Caird 613, 642*—Large tracts of country suitable for wheat cultivation, where there is irrigation, *ib. 636-638 643-645*—Probability of wheat being substituted for other less paying crops, if its price should rise, rather than of new land being brought into cultivation, *ib 671-675*.

Great development expected as the result of railway extension, *Coke 1260 et seq.*—Grounds for believing that an increased export of wheat would not tend to diminish that of other articles of commerce, *ib. 1266 1395-1397*—Favourable condition of the freight market as regards the import of Indian wheat into England, *ib 1331-1333*

Contention that the extension of railways will lead to a largely increased cultivation of wheat, and also to a material rise in the price, *Lord 2462 2194 2507-2511 2560-2567. 2572-2579*—Opinion that if the rates were reduced the production of wheat in India would be materially increased, *Bythall 2627*

Large increase in the export trade in wheat, if the railway system be properly extended, *Conway-Gordon 5460-5468. 5510-5520. 5560-5583*—Belief that the cultivation of wheat will be principally confined to the ryots, and not undertaken to a large extent by capitalists, as in the case of indigo, *Hunter 7243, 7244*.

5. *Conclusions arrived at by the Committee*

Reference by the Committee to the enormous development since 1876-77 in the export trade in wheat, *Rep vi*.

Data for the conclusion that the large increase of export in prosperous years is not prejudicial as regards subsequent outbreaks of famine, *Rep vii*.

Tendency of the stimulus of high prices to induce the people not merely to substitute wheat for less remunerative crops, but also to improve their crops and to extend the area of cultivation, *Rep. vii*.

See also *Chattisgarh Cultivation of the Soil. Grain*.

Wood, Sir Charles Views of Sir Charles Wood in 1861 as to the exceeding importance of works of irrigation, &c., *Sir J. Caird 381-383*.

Wood, William Martin. (Analysis of his Evidence)—Has been many years in India as editor of a daily paper; is intimately acquainted with the course of railway construction in that country, 2274, 2275.

Decided opinion that there should be a reasonably large and rapid extension of all public works, and especially railways, in India; expediency of expending ten millions annually for this purpose, 2276-2278—Propriety of considering the proposals of private companies for the construction of railways, conditionally on an efficient and active Government control, 2279, 2282, 2286, 2287.

Grounds for the view that the proposed coast line from Madras to Calcutta is a good example of a line that ought not to be made, 2281, 2282—Strong opinion that the lines to be constructed should be on the metre and not on the broad gauge, contention that there is a great aggregate saving in metre gauge as opposed to broad gauge lines, 2283-2285, 2288, 2289, 2295.

Great

Report, 1884—continued

Wood, William Martin—continued.

Great importance of canal extension, which for various reasons is much more economical than railways for conveyance of inland traffic, 2290-2291.—Advantage of waterworks in the fact that a large proportion of the outlay in their construction remains in the country itself, whereas in the case of railways a large amount goes out of the country, 2292

Wood, Mr. Memorandum submitted by Mr. Wood, in connection with tables, showing the advantages of taking up Indian loans in England instead of in India, *App.* 691, 692.

WORKING EXPENSES.

1. *Sundry Details respecting the Cost of Working the Indian Railways Generally*
2. *Broad Gauge Lines and Narrow Gauge Lines, respectively.*
3. *Statistics suggested by Mr. Rendel.*

1 *Sundry Details respecting the Cost of Working the Indian Railways Generally.*

Several advantages in working the railways through the agency of companies, *Strachey* 31. 92-94 104-114.—Assertion that the cost of working is not greater in the case of the State lines than of the older lines, *ib.* 1228

Favourable comparison as regards the cost of working the standard or broad gauge lines, explanation that it is the cost of working and not of construction which affects the trade of India, *Conway-Gordon* 4336

Conclusion that of all the circumstances affecting the cost of working a railway, gauge is the least important; contention that quantity of gradients, cost of coal, and labour and management, are far more important items, *Rendel* 5624, 5691, 5692.—Important consideration that if railways are to be extended the cost of the working, as well as the cost of construction, must be cheap, *ib.* 5718-5720

Comparison as to the cost of conveyance of both passengers and goods on the Indian and the English railways, argument that the Indian cost is so much lower on account of the smaller waste of power, *Rendel* 5763-5786.—Conclusion that the whole secret of the low working cost in India is due to utilising the trains to a greater degree than is the case in England, *ib.* 5922-5926

Explanation that the cause of the difference between Mr. Rendel's figures and those of the Government of India in regard to the cost of working is that the two sets of figures go on different bases, *Conway-Gordon* 6719.

Abstract statement of working expenses in respect of each of the State railways in each year since 1868-69; *App.* 716, 717.

Abstract statements of the annual working expenses of each railway throughout India *App.* 738, 739 746, 747

Accounts showing the working expenses of the several State railways in each of the years 1881-82, 1882-83, and 1883-84, *App.* 751-753

Statement showing the working expenses in each year of each railway in India from the commencement, *App.* 770-781

Abstract statistics of the cost of working passenger and other coaching traffic on each railway in each half-year from 31st December 1880 to 30th June 1883; *App.* 798-802.

Abstract statistics of the cost of working in respect of maintenance in each half-year from that ending 30th June 1881 to that ending 30th June 1883; *App.* 822-827.

Abstract statistics of traffic expenses in proportion to traffic earnings in each half-year from that ending 30th June 1881 to that ending 30th June 1883, *App.* 828-833.

Statistics respecting locomotion expenses in relation to train mileage in different half-years, *App.* 834-839

Details relative to carriage and waggon expenses in relation to the mileage run, *App.* 840-845

Particulars as to the general charges in different half-years, *App.* 846-851.

Paper, submitted by Major Conway-Gordon, showing the financial results of the transactions connected with the working of the railways generally, distinguishing between the guaranteed railways and the State railways, *App.* 852

2 *Broad Gauge Lines and Narrow Gauge Lines, respectively:*

Explanations respecting the relative cost in the case of the broad and narrow gauge, *Trotter* 1034-1037 1784-1788.—Assertion that if the rolling stock of the narrow gauge lines were differently designed, they would carry much more dead weight than they do, *Glover* 1969-1971.—Belief that the working of broad gauge traffic is less expensive than the narrow gauge working, *Bythell* 2711.

Report, 1884—continued.

WORKING EXPENSES—continued.

2. Broad Gauge Lines and Narrow Gauge Lines, respectively—continued.

Statement to the effect that the working expenses are greater in the case of the narrow than of the broad gauge, *Conway-Gordon* 4653-4659, 4717-4726.

Statistics showing that the cost of working the broad gauge is considerably greater than the cost in the case of the narrow gauge, cost of working any railway largely affected by the quantity of traffic, *Rendel* 5624, 5625, 5689-5692, 5878-5883, 5949-5952, 6024-6026—Undoubted effect of increased traffic on metre gauge lines that the cost of carrying will decrease, *ib.* 5624.

Information generally on the subject of the comparative cost of the working upon broad and metre or narrow gauge railways in India, assertion that the cost of working locomotives on the metre gauge is considerably lighter than on the broad gauge, *Conway-Gordon* 6720-6781, 6785-6787, 6839-6847.

Belief that it is generally admitted that metre gauge lines work their passenger traffic with less dead weight than the broad gauge; as regards goods traffic the dead weight is practically the same on both gauges, *Conway-Gordon* 6773-6781.

Great disproportion on the broad gauge lines which the dead weight bears to the freight on account of the antiquated character of the broad gauge rolling stock, *Conway-Gordon* 6781—Statement that the lesser cost of the waggon and carriage traffic on the metre than on the broad gauge lines is to be entirely accounted for by the fact that on the narrow gauge lines the stock is all new, *ib.* 6785, 6786.

Memorandum as to the relative cost of rolling stock on broad and metre gauge railways, *App* 605-607.

Comparison between the East Indian, the Great Indian Peninsula, the Rajpootana-Malwa, and the Bombay, Baroda, and Central Indian Railways in 1883, and in other years, as regards cost of working, &c., *App* 653.

Cost of working coaching traffic, distinguishing between broad gauge and narrow gauge lines, *App*, 803.

Abstract statistics of the cost of working goods traffic on each of the broad and narrow gauge lines, respectively, *App*, 804-809.

3. Statistics suggested by Mr. Rendel.

Explanations in connection with the system of statistics introduced into India by witness, in conjunction with General Strachey and Mr. Danvers, and the value thereof as a check upon the cost of working, *Rendel* 5621, 5749-5770.

Grounds for believing that the introduction of a similar system of statistics as to the working of railways in England would lead to much greater economy, utter waste of power in England on account of running far more trains than the traffic requires, *Rendel* 5750-5754.

Decided opinion that such statistics as those referred to by Mr. Rendel are of relatively small importance; what is most wanted is an energetic manager who is always up and down the line, *Conway-Gordon* 6844, 6845, 6851-6853.

See also Administration and Management Coal, Engines and Rolling Stock, Financial Results of Railways, Rates and Fares.

I N D E X

R E P O R T

S E L E C T C O M M I T T E E

E A S T I N D I A
R A I L W A Y C O M M U N I C A T I O N

*Ordered, by The House of Commons, to be Printed,
18 July 1884.*

[*Price 1 s 7 d.*]

Under 14 oz
H-26 6886,

EAST INDIA (RAILWAY COMMUNICATION COMMITTEE).

RETURN to an Order of the Honourable The House of Commons,
dated 12 March 1885,—for,

COPY “ of CORRESPONDENCE between the Secretary of State and the Govern-
ment of *India*, on the Subject of the REPORT of the SELECT COMMITTEE of
1884 on EAST INDIA RAILWAY COMMUNICATION ”

India Office, }
12 March 1885 }

JOHN K CROSS,
Under Secretary of State for India

(*Mr Kynaston Cross*)

Ordered, by The House of Commons, to be Printed,
12 March 1885.

LONDON
PRINTED BY HENRY HANSARD AND SON,
PRINTERS TO THE HOUSE OF COMMONS.

To be purchased either directly or through any Bookseller, from any of the following Agents, viz
Messrs HANSARD 13, Great Queen street, W.C., and 32, Abingdon-street, Westminster,
Messrs LAYE and SPOTTISWOODE, East Harding-street, Fleet-street, and
Sale Office, House of Lords,
Messrs ADAM and CHARLES BLACK, of Edinburgh,
Messrs ALEXANDER THOM and Co, or Messrs HODGES, FIGGIS, and Co, of Dublin.

COPY of CORRESPONDENCE between the Secretary of State and the Government of India, on the Subject of the REPORT of the SELECT COMMITTEE of 1884 ON EAST INDIA RAILWAY COMMUNICATION

— No. 1. —

The Secretary of State for India to the Governor General of India in Council,
14th August 1884, No 89 (Railway).

My Lord Marquis,

Para 1 THE Select Committee of the House of Commons on Railway Communications in India having now reported, I wish, without delay, to place before your Lordship my views of the effect which their recommendations must have on our future railway policy

2 The main features of the Report are as follows :—

The Committee consider that the evidence in favour of a more rapid extension of railways is conclusive (para 20), that the maintenance of the rigid technical distinction between productive and protective lines cannot be maintained (para 28), that the amount proposed to be spent upon railways, from all sources, by the Government of India in the next six years is moderate (para. 30); and that money may, in certain circumstances, be borrowed in England to carry out such schemes as shall have been approved by the Secretary of State in Council (para 31).

But they are of opinion that the bulk of the lines made should be self-supporting (para. 28), that no portion of the Famine Grant should be hypothecated as interest on capital (para 32); and that railway extension should not involve additional taxation (para 34)

They also recommend that the responsibility for deciding what amounts may, with safety to the finances, be borrowed for Public Works, should rest with the Secretary of State in Council (para 33).

3 Your Lordship will notice that the policy advocated in the Report depends upon the financial position of India, and that the responsibility for all decisions as to what is or what is not safe expenditure is thrown upon the Secretary of State in Council.

4 The effect of the Report is to advise the relaxation of the rigid rules of 1879, as applicable only to the financial situation at that time. But the Committee decline to accept in full either of the fundamental proposals contained in your Financial Letters of the 23rd January 1883, No 29, and the 29th January 1884, No 27, respecting the construction of famine lines, and the hypothecation of any portion of the Famine Grant.

5 With the general tenour of the recommendations of the Committee, as above recited, I fully concur, and I am anxious to know, as early as possible, whether the adoption of the recommendations contained in paras. 28 and 32 will necessitate any considerable change in the lines of railway which your Government have included in Schedule A

6 With respect to the funds which will be available for construction, I would point out that, as in the opinion of the Committee the technical distinction between productive and protective lines may be relaxed (though the Committee think that the bulk of the lines should be self-supporting), I shall be prepared to authorize a moderate outlay from borrowed funds on lines which could not be classed as productive, as that term has been hitherto defined

7 Your Government at present allot 500,000 *l.* from the Famine Grant for Protective lines, and also an annual sum from Revenue (under the head of "State Railways not classed as Productive") of about 300,000 *l.* Continuing the former allotment as heretofore, it will now be possible, without departing from the principles laid down in the Report, by a suitable adjustment of your ordinary Public Works Grant, to provide a moderate sum, as a charge against the general revenues, for the payment of interest on capital outlay for railways of the non-productive class, and I shall be ready to sanction an allotment of borrowed capital, not exceeding 400,000 *l.* or 500,000 *l.* yearly, for expenditure on lines of this description, thus providing means for the more rapid construction of famine lines than has been heretofore possible.

8 Having regard to the strong opinion expressed by the Committee against incurring the risk of additional taxation on account of railway extension, I should be glad, before authorizing any specific increase of the expenditure of borrowed funds for railway purposes, to have a careful forecast of the amount which you anticipate may be required in the next six years, and a statement of the manner in which you propose to apply it.

9. I should wish at the same time to receive from your Excellency an expression of your opinion whether your financial position is such as to justify any acceleration of railway construction in the present year, especially in the form of additional grants to works already sanctioned and under construction. If no such immediate increase of outlay is practicable, it will be well for you to consider at once what provision should be made in the Budget Estimates of next year for the enlarged operations which you would propose, and to what extent such operations are likely to affect the estimates of future years.

10. In considering the methods by which railway construction may be more actively proceeded with, it must be borne in mind that I shall be extremely averse to the operations undertaken directly by Government being extended beyond the capacity of the present Public Works staff, against the increase of which the Committee have reported (para. 22). It will be necessary, therefore, to determine which lines may most advantageously be conceded to companies, and upon this important point I await your Lordship's opinion.

11 With reference to the projected railways, respecting which negotiations have already taken place in this country, I shall consider carefully what steps should be taken, and I will, as soon as practicable, communicate my decisions to your Lordship.

12. It is further necessary for me to add that, although I have thought it desirable thus briefly to inform your Excellency, without loss of time, of the general conclusions which I have been able to adopt on some of the chief points which are discussed in the Report, yet the matters which arise in connection with it are so various and of such importance, that they will require my careful consideration in Council before I can pronounce detailed opinions on them, and I shall accordingly again address your Government on the subject as soon as I am able to do so.

I have, &c.
Kimberley

— No. 2. —

(Extract)

The Governor General of India in Council to the Secretary of State for India,
Simla, 22nd September 1884, No 25 (Secret)

THE resumption, under your Lordship's orders, of the construction of the Sind-Pishin Railway, has brought prominently under our notice the subject of railway communications on our North-West frontier generally. Much has been done during the last few years to improve these communications. The Attock Bridge has rendered the line to Peshawar complete, and, when the bridge which is being built over the Indus at Sukkur is finished, we shall have an unbroken line

line of railway from Karachi to Peshawar. But there are still certain other lines of communication required to complete the system of railways and roads which has for many years past been considered desirable, in order to place the North-West frontier of India in a satisfactory condition of defence, and we are of opinion that the time has now arrived when these subsidiary lines should be considered, with a view to determining which of them should be constructed, and the time and order in which they should be undertaken.

The following is a summary of our recommendations, to which we add the Sind-Pishin Railway, in order to bring into one view the whole scheme and outlay contemplated for the military protection of our North-West frontier —

Communications Recommended	Length.	Estimate. Conventional Sterling.
	<i>Miles</i>	<i>£.</i>
(1) Railway, Nari to Shebo, with branch to Quetta - -	175	2,000,000
(2) Railway from Lala Musa, <i>via</i> Darya Khan and Muzaffargarh, to Sher Shah, with branch from Muzaffargarh to Indus opposite Dera Ghazi Khan, including bridge at Pind-Dadan Khan, and ferries over Indus and Chenab.	381	2,150,000
(3) Ferozepore Bridge - - - - -	5	400,000
(4) Road from Dera Ghazi Khan to Pishin plateau - -	250	200,000
(5) Road from Dera Ismail Khan to Khushalgarh, <i>via</i> Kohat and Banu, including Kuram and Gambela Bridges.	195	300,000
TOTAL - - -	986	5,050,000

The total outlay which appears to us desirable, including that for the Sind-Pishin line already sanctioned, is thus five millions in round numbers. An index map,* showing the lines proposed, is appended.

With regard to the order in which the projects now recommended should be taken up, and the rate at which the whole should be proceeded with, we would remark that works of the nature proposed cannot, for the most part, be taken up, one by one, from year to year, or properly executed by dribblets. Individually they occupy too long a time in construction. Once started, economy is best secured by keeping the establishments at their full working power, and by completing successive sections as an aid to the works on the rest, and in order to secure some return for the outlay at the earliest possible date. Funds must obviously be supplied according to the nature of the works, and not in equal annual instalments, still less by uncertain grants, the waste and other evils attendant on which have been fully recognised in the Despatches specified marginally †. The Sind-Pishin Railway is being proceeded with as rapidly as is consistent with economy. As to the other projects, portions of the roads might stand over for a while, but the railway, and especially the large bridges, should be put in hand as soon as preliminary arrangements will allow. The periods occupied in completing them may be taken at from two to three years for the roads, fully three for the railway, and fully four for the Ferozepore Bridge. We consider these periods as the maxima consistent with economy.

We append a forecast, which has been prepared by our Director General of Railways, showing the time and manner of proceeding with the several works so as to combine reasonable progress with economy. Thus we propose for adoption, remarking that, while it is very desirable to ensure a fair start of the new works in 1885-86 by undertaking preliminaries during the current cold season,

* A copy of this map has been placed in the Library of the House of Commons.

season, the actual outlay may be expected, owing to delay in arrival or adjustment of stores, and other causes, to spread rather more largely over the later years, to the corresponding relief of the earlier ones.

We will now proceed to consider the financial aspect of our proposals, premising that we are of opinion that the whole cost of the Sind-Pishin Railway should be provided in whatever manner may be determined on for the rest of the projects.

We must also explain that we adhere to the proposals contained in our Railway Policy Despatches, that certain indispensable railways should be constructed in the definite period of about six years, out of funds to be provided accordingly, which were re-affirmed in our Despatch, No. 121, of the 28th April last. This decision on our part is in no way affected by the admitted necessity for frontier communications. We have to provide against two evils, famine and complications on our North-West frontier. Considering that the accepted famine cycle is near its close, most may well think the former the more likely to supervene; but it should not be forgotten that the best way of deferring the latter is to make timely preparation against them. The protection from both should certainly be provided concurrently, and to the full extent necessary in the case of each. Our subsequent remarks will proceed on this assumption.

There are three ways in which the necessary funds may be provided. We may allot annually in the budget such amount out of revenue as we can afford, a fixed amount if possible, we may provide for them as far as possible in this way, and borrow only so much more in each year as may be necessary in order to bring the total allotment up to such sum as may be deemed necessary in order to carry on the works without undue delay; or, finally, we may borrow the whole amount required for these special works.

The first of these causes we do not advocate, because the annual surplus we could devote would not suffice, as already shown, to complete these works within a reasonably short space of time. Moreover, the system of charging to revenue is peculiarly unsuited to works of the character of those proposed, because it tends to restrict and render uncertain the annual outlay. Railways cannot be economically constructed by grants (a) petty in amount, spread over a long period, (b) equal in amount from year to year, (c) uncertain till the financial conditions of each year can be foreseen.

The second course we deem undesirable, because it interferes unnecessarily, for an exceptional purpose, with the established system under which our ordinary loans for public works are carried on, and also precludes our making special arrangements for such loan as may be required, the nature of which we will presently explain. At present we have a system of spending 2½ millions a year on certain public works, and permission to borrow that amount, minus any sum by which, owing to surplus revenue (which is now usually realized) or other accretions, our cash balances may exceed our working needs.

This system is based on the following recommendation of the Select Committee of the House of Commons in 1879.

“That all expenditure on the construction of Productive Public Works should be treated as borrowed money, so that, if, instead of borrowing to the full extent of such expenditure, a part of the surplus revenue of the year can be devoted to this purpose, the general debt of India be treated as relieved, and the Productive Public Works debt as increased to such extent.” (Report, page xxi.)

Supposing, by way of illustration, this surplus sum to be a million in any year, and the annual loan therefore to be 1½ millions only, instead of the normal 2½ millions, then, if a new annual charge of a million for strategical communications supervenes, the financial result will be exactly the same, whether the million of surplus be taken away to meet the new charge, and the ordinary annual loan be raised to the full 2½-million limit, or whether things be left as they are, and a million be raised separately for the strategical communications. In the one case we can say that we are making strategical railways out of revenue, in the other that we are making them out of capital, but

SELECT COMMITTEE ON EAST INDIA RAILWAYS

but there is not a whit of difference between the two, except in the name of the thing. Call the transaction what we please, but the fact remains that *the new charge causes the additional loan.*

As regards the name of the thing, however, there is no advantage in borrowing to complete the normal 2½ millions, compared with borrowing separately. The surplus is just as liable to reduction by outside pressure or for other administrative claims now, as it would be if appropriated as proposed. A loan would stand behind, to supplement its shortcomings, in the one case as much as in the other; the amount to be borrowed would be the same in both; and neither method would afford any greater check or stimulus to economy than the other. On the other hand, the change of an established system is at all times undesirable, and carries special disadvantages in this case compared with the third course.

To the third course, namely, that of borrowing the whole amount required for these special works, we incline, for the following reasons.—Although the railways and roads which we propose to construct will not be wholly unproductive, we cannot expect that they will be remunerative in the technical sense, that is to say, we cannot look forward to their yielding a net return sufficient to pay 4 per cent on the capital outlay within a prescribed period. On the other hand, they will yield a return which, though not represented by money, will be none the less substantial, in the increased security which they will give to our frontier. These benefits will not be confined to the immediate present, but will be of a permanent character, and it therefore seems to us legitimate that the burden which they entail should be distributed over a lengthened period, and should not be imposed wholly on the taxpayer for the time being. And, if it is legitimate to borrow for this purpose, we think that there are reasons which also make it desirable. The expenditure is exceptional, and will not recur. To the undesirability of altering an established system we have already alluded.

There is, however, a still more important argument in favour of borrowing the whole amount required for the construction of these communications, namely, that the loan then need not be one of the ordinary nature, but may be on a distinct basis, such as to provide for the discharge of the capital obligation within a term of years.

Considering that the outlay in this, as in most instances of communications made for strategical purposes, is likely to be technically unremunerative,* we hold that the loan contemplated to meet it ought not to be, like ordinary loans, a permanent addition to the debt of the country, the reason for such exceptional treatment being that the outlay is, by the hypothesis, not an investment but a burden.

Capital invested in the "indispensable" general railways becomes indirectly productive at once, in the protection it affords against periodically recurring famine, and directly so at no distant date.

But with capital invested in military defences the case is otherwise. The outlay is a burden, entirely so in the case of roads or fortifications, to a greater or less degree so in that of railways, according to the estimate of their net earnings. Its "protective" value is indefinite in the time of taking effect. Such outlay ought not to be left as a permanent burden on the national resources, it should be cleared off. And, because such clearing off is desirable, but ought not justly to fall on, and if large cannot be met by, the taxpayers of a very few years, the best form of ensuring it is to provide this outlay by a loan automatically repayable in a reasonably short time, say 30 years.

We need scarcely say that we have not overlooked the discussions in 1860-68 on the question of providing funds for the construction of barracks in India, and we entirely concur in the principle then adopted by the Government of India and approved by the Secretary of State. The following words used by Mr Massey in his speech of 5th March 1867 may be quoted as a good exposition of that principle.—

"Is all the cost to fall on the taxpayers of the day, and all the benefit to be derived, without any cost other than the annual repairs, by the taxpayers of

“ 1870 and future years? We think we are not warranted in extending taxation for such a purpose, and that we shall fulfil our duty if we provide all that we can out of revenue, and throw a part of the burden on our successors. We shall borrow a million towards the construction of barracks in the ensuing year, and, even after this million has been borrowed, the remaining million will be charged to the revenues of the year. Thus the sum we shall provide out of revenue for this extraordinary charge is nearly equivalent to the whole estimated produce of the new taxation. In fact, had it not been for this change, we could have exactly balanced the estimates for next year.”

Our proposal, no doubt, carries out the principle thus enunciated in a different way from that adopted by Lord Lawrence's Government; but we think our plan is distinctly preferable, inasmuch as it distributes the burden evenly over a prescribed period, instead of dividing it into two portions bearing with unequal pressure upon the present and the future.

Two important precedents for the course we propose are to be found in the manner in which the State debt created by the purchase of the East Indian and Eastern Bengal Railways has been dealt with. In the former case 32½ millions sterling were provided by annuities terminable in 73 years. In the latter about 3½ millions are similarly to be dealt with by annuities, but the details have not yet been supplied to us by your Lordship.

The debt we contemplate will be on exactly the same principle, only we consider that the term of repayment should be much shorter. If 30 years were adopted, the five millions would be discharged by annuities costing 271,855 *l* per annum, taking interest at 3½ per cent. Another method is that of fixed annual payments, comprising interest and sinking fund, which has been followed in India in the case of several loans to municipalities and port trusts, and of the Mysore debt; but, on the whole, we are inclined to prefer that of annuities. In any case, there would be against the charge the set-off of whatever profit the new railway might yield.

For the reasons stated in the preceding five paragraphs, therefore, we hold that the simplest and wisest course is to leave alone, as it is, our existing system of borrowing annually for “Indispensable” General Railways and Irrigation, a fixed sum, *minus* surplus revenue and accretions, and to borrow separately, on an automatically repaying basis, such sum for strategical communications as may from year to year be necessary in order to their completion in due normal course, without either special pressing on the one hand or wasteful delays and uncertainties on the other.

In conclusion, we must explain that we are unanimously of opinion that the construction of the communications recommended above would strengthen our means of defence upon our North-West frontier, and, by increasing the mobility of our army, would add to its defensive power.

Our Honourable Colleagues, Sir Stewart Bayley, Mr Ilbert, and Sir Auckland Colvin, however, do not concur in certain suggestions contained in this Despatch, and their Minutes on the subject are forwarded herewith.

His Excellency the Governor General has embodied in a separate Minute, also-enclosed, his own views.

Enclosure 1, in No 2

FORECAST of Proposed EXPENDITURE on FRONTIER COMMUNICATIONS, in Conventional Sterling

113

2

ITEMS	Total probable Cost	Outlay in 1883-84	Estimated Outlay in				REMARKS
			1884-85	1885-86	1886-87	1887-88	
	£	£	£	£	£	£	
Sind Pishin Railway - - - -	2,000,000	122,700	777,300	850,300	150,000	100,000	The grant for the current year is not yet up to the sum stated, but the amount shown can probably be nearly worked up to.
Railway from Lala Musa <i>via</i> Darya Khan and Muzaffargarh to Sher Shah, with branch and ferries	2,150,000	-	300,000	1,250,000	800,000	100,000	In 1st year,—payments for land, housing staff, brick-making, and preparation of materials generally In 2nd year,—construction pushed on, permanent way provided and partly laid Pind Dadan Khan Bridge foundations and piers In 3rd year,—ferry steamers, rolling stock supply, construction continued In 4th year,—completion of line.
Sutlej Bridge at Ferozapore - - - -	400,000	-	50,000	150,000	150,000	50,000	In 1st year,—brick-making and housing staff In 2nd year,—well-sinking and construction of piers In 3rd year,—girders supplied and erected In 4th year,—completion
Road from Dera Ghazi Khan to Pishin -	200,000	-	1,000	80,000	80,000	39,000	In 1st year,—survey In 2nd year,—road-making and preparation of materials for bridges and culverts In 3rd year,—bridges and culverts carried on In 4th year,—completion
Road from Dera Ismail Khan to Khushalgarh <i>via</i> Kohat and Bannu	300,000	-	1,000	100,000	150,000	49,000	In 1st year,—survey In 2nd year,—road-making and preparation of materials and commencement of large bridges In 3rd year,—bridges and culverts carried on. In 4th year,—completion.
TOTAL - - - £	5,050,000	122,700	1,129,300	2,430,000	1,030,000	338,000	

SELECT COMMITTEE ON EAST INDIA RAILWAYS

Enclosure 2, in No. 2

(Extract)

MINUTE by the Honourable Sir *Auckland Colvin*, K C M G, C I E

1 I FIND myself, to my regret, at variance with the views of his Excellency the Viceroy and the majority of my Colleagues, but I am so wholly opposed to some of the suggestions contained in the Despatch, that I am compelled to enter a strong dissent

2 The frontier communications, which form the subject of the Despatch, are by no means the first works of this kind which the Government of India has had to undertake. Like the frontier railways constructed in 1878-79, and the barracks built a decade earlier, they are designed purely for military objects, and for strategic purposes. They are not likely to be remunerative. They are precisely analogous, financially viewed, to the former works alluded to. The mode of finding funds should therefore, in my judgment, be identical.

3 In the Despatch it is said —

“ There are three ways in which the necessary funds may be provided. “ We may allot annually, in the Budget, such amount out of revenue as we can afford—a fixed amount if possible, we may provide for them as far as possible in this way, and borrow only so much more in each year as may be necessary in order to bring the total allotment up to such sum as may be deemed necessary in order to carry on the works without undue delay, or, finally, we may borrow the whole amount required for these special works ”

The second of the methods above enumerated, it might have been added, is that laid down by the Secretary of State for India in his letter, No 252, dated 8th November 1865, for adoption on previous occasions—namely, to construct this class of works as far as possible out of revenue, and from borrowing only so far as revenue is not available. The reasons specially applicable to India for adopting that course will be found in Lord Lawrence's Minute of the 18th March 1868, in Mr Massey's Budget Statement of 1867-68, in Sir John Strachey's Minute of the 21st March 1868, and in his speech on the Certificate Bill on 20th March 1868, in Sir Richard Temple's Budget Statement for 1869-70, and in Sir John Strachey's Budget Statement for 1880-81. Lord Lawrence held that, if the Government of India could pay its way either altogether or in part without incurring fresh loans, it was its clear duty to do so. In view of the great debt which India already owed, the heavy liabilities already incurred which appertain to the guarantee system, and the peculiar character of British power in India, he believed that the only prudent and wise course was to make good the wants of the day, so far as practicable, out of its income. Mr Massey, while borrowing a million in 1867-68 on account of barrack expenditure, charged another million to revenue, saying, “ I should have preferred to go on as hitherto, defraying this charge, special and temporary as it is, out of the revenues of India,” and added that the Government of India would fulfil its duty if it provided all that it could out of revenue, and threw part of the burden on its successors. He explained also why he considered the Portsmouth Defences precedent inapplicable to India. Sir John Strachey urged that borrowing should be resorted to only if revenue was incapable of meeting the charge without recourse to new and burdensome taxation. In his Budget Statement of 1880-81, he repeated, in more emphatic terms, this language. Finally, the Secretary of State considered it a matter “ of course ” that “ expenditure of this kind ought to be provided for, if possible, out of the revenues of the current year, but if, at any time, the amount of expenditure which it would be expedient to incur cannot be drawn from the ordinary income of the year, it must be left to the Government of India to determine, in communication with the Home Government, in what manner the requirements of the public service shall be met.” These considerations have governed the mode of meeting the expenditure on works of this class up to the present time, and, as the Member in charge of the Financial Department,

I consider

I consider it my duty, before having recourse to loans, to find from revenue, so far as may be without unduly starving administration, the sums necessary for frontier communications, as my predecessors found them for the works constructed during their time

4. In the Despatch objection is taken to what has been, as I have shown in my third paragraph, the method of raising funds hitherto prescribed for adoption, on the ground that it interferes unnecessarily for an exceptional purpose, "with the established system under which our ordinary loans for public works are carried on, and also precludes our making special arrangements for such loan as may be required, the nature of which we will presently explain." So far as I am aware, the hitherto practice has not been found, by experience, in the slightest degree to interfere with the customary loans for public works. In 1868, as in later years, the Government of India was borrowing for public works, as it is still borrowing, but no complaint has as yet been made that the system pursued in the case of "extraordinary" works (as they were then called) interfered with the ordinary loans. If, as the Despatch says, and as I quite agree, the change of an established system is at all times undesirable, then I am wholly at a loss to see on what grounds it is sought to recommend the "special arrangements" devised in the Despatch in place of the system now in force. The expediency of special arrangements of the nature contemplated I will discuss presently

5. I do not think it necessary to enter into the question as to whether or no the new charge causes the additional loan, because it has no practical bearing on the matter before us. Whatever, viewed abstractedly, may be the case in point of fact if frontier communications are charged to capital and not to revenue, a surplus of greater or less extent will appear upon our accounts. One of two things will then inevitably happen: either the Departments will press for increased expenditure, and it will practically be impossible to resist proposals which, however objectionable, may, in view of such surplus, be plausibly put forward, or, in order to enforce economy, we shall be obliged to remit taxation. Bearing in mind the great remissions of taxation which have taken place during very recent years, and the peculiar dangers to which the Indian revenues are liable, the time has not yet come when we can with safety make further reductions. Reduction of taxation at the present time would, in my judgment, be a far less evil than profuse and needless expenditure; but, none the less, it would be premature, and, in view of the limited resources open to us in India, and of the unforeseen calls to which we are liable, very dangerous. Apart from these considerations, I apprehend that the precedent of meeting this expenditure solely from loans (should it be admitted) will be fruitful of most pernicious consequences. It will be sought hereafter, on the strength of such a precedent, to charge to loans various other schemes, which might have been properly opposed on the ground that the revenue resources of the Government were incapable of meeting them. There is no more wholesome check upon extravagance, whether it arises from the desire to hasten works of which the utility is doubtful, or which admit of being gradually carried out, or whether it is caused by apprehensions as to danger outside our frontiers, than the necessity of finding funds with which to meet the hobby or the scare of the hour. In India, where the Financial Department cannot appeal from administrative pressure to the support of a representative body, an authoritative self-imposed check of this nature is all the more necessary, and is, to my mind, if we are to be preserved from disorder, imperative. If facilities are to be given for borrowing in order to meet proposals of this kind, our loans will be indefinitely added to, while ordinary expenditure will be wantonly increased. Hence, on every consideration of economy in the present and prudence for the future, I wish emphatically to protest against charging frontier communications to loans, without any attempt to meet them, in whole or in part, from Revenue.

6. The contention that by the "special arrangement" put forward, viz., borrowing separately for frontier communications, and establishing a sinking fund especially for the loan contracted on this account, we are in spirit, if not in the letter, acting on the principle adopted in 1867-68, rests entirely, it appears to me, on a fallacy. We shall be engaged in two operations, the finding

of funds for our general railways, and the finding of funds for our frontier communications. The money required for a sinking fund for the latter would be so much abstracted from the funds necessary for the former, and (unless we adopt the course alluded to in the next paragraph) we should therefore have to borrow on account of our general railways, annually, a sum precisely equivalent to that which we had withdrawn from our resources to provide the sinking fund for frontier communications. At the end of 30 years, or whatever the term might be, the debt incurred on account of the general railways would be increased by a figure equal to that which had been devoted to the extinction of the loan for frontier communications. Posterity, saddled with the interest on increased borrowings equivalent to the sum which had been withdrawn for the sinking fund, would in no way that I can see benefit, while, on the other hand, the taxpayer of the present and intermediate day would have to bear for his part the heavy burden imposed upon him from revenue for a phantom sinking fund. The distribution of pressure would be equalised only in the sense that the immediate present and the remote future would be equally subjected to taxation. Should a famine cycle, it may be added, be approaching us, we should very shortly have to suspend our so-called sinking fund.

7 The arguments, finally, on which the Government of India based their decision in 1868 have even greater force at present. "When these works are finished," wrote Lord Lawrence, "and this will not be accomplished, I am satisfied, in the period generally supposed, we shall have to construct manifold other works, each deemed very important and imperatively necessary, such as fortified posts, places of refuge, drainage works, and many others, which will absorb vast sums of money. Now, none of these will be really productive, though all may be undeniably very important." In other words, each successive generation has its peculiar burdens of this nature, and each, so far as possible, should meet them from its own resources. It is said in the Despatch that the expenditure now contemplated is exceptional and will not recur. This precise class of expenditure may possibly not recur, but nothing could show more conclusively than the situation now before us how circumstances may saddle our successors, as we are saddled, with analogous unforeseen expenditure. Again, all that was urged against loans in 1868 applies with much greater force in 1884, in view of the very serious change which has since taken place in the value of silver, and of the additional burden in the form of exchange which loans entail upon our revenues. The more we borrow, it may be added, the more certainly, in view of the limited resources of the local market, and of the competition of local bodies, such as the Calcutta and Bombay Port Trusts (about to enter the market for considerable sums), must we increase our sterling debt. If, indeed, we are to borrow for all kinds of railways, I think it extremely probable, in view of the above grave considerations, that we shall find ourselves forced to reduction in the expenditure on general railways almost equivalent to what it is desired to borrow for frontier communications. Further, the policy of increased borrowing for works in which we are embarked will for some years not return an adequate profit, and, *pro tanto*, this additional burden must fall on those who come after us. Our position and resources are, finally, stronger now than they were in 1868, or when the frontier railways were commenced in 1878, and what could be accomplished from revenue then is proportionately easier of accomplishment at present.

8. I myself think it exceedingly doubtful whether there is any such urgent need for the rapid construction of frontier communications as to compel us at present to have recourse to borrowing on that account. If, however, I should prove to be wrong in this respect, either owing to the revenues falling short of what may be expected, or to inevitable increase of ordinary expenditure, or to the need of pushing on the works at greater speed than I think necessary, I should have no objection to borrowing the difference between what we can furnish from revenue and what may be required. Assuming, however, that a period of about six years is a sufficient period for the construction of frontier communications, I see at present no reason for doubting that, unforeseen accidents apart, they may be met almost wholly from revenue.

9. So far as I am personally concerned, I can only give my adherence to the paragraph commencing "we must also explain, &c," subject to the result of consideration of the subject after final exchange of views with the Secretary of State on the Report of the Parliamentary Committee. I would also qualify the last section of that paragraph by inserting the words "so far as the finances will admit," immediately before and as the commencement of the passage now beginning "the protection from both "should certainly, &c."

19 September 1884

A. Colvin.

I agree with Sir A Colvin that these frontier communications should be constructed as far as possible out of revenue, and from borrowing only so far as revenue is not available. Exceptional expenditure of this kind is always recurring in various forms and for various reasons. I share Sir A. Colvin's doubts as to whether there is such urgent need for rapid construction as will make borrowing necessary.

C. P. Ilbert

I agree in Sir A Colvin's objections, and consider that the expenditure should be provided for as proposed in the early part of para 3 of Sir A. Colvin's Minute.

S. C. Bayley.

Enclosure 3, in No 2.

(Extract)

MINUTE by His Excellency the Governor General

As I agree with the majority of my Honourable Colleagues in regard to the mode in which the money required for the construction of the proposed frontier railways should be raised, it is not necessary that I should make any lengthened observations upon that subject, although I must express my sincere regret at finding myself at variance upon such a question with my Honourable Colleague Sir A Colvin. There is, however, one portion of his Minute upon which I desire to say a few words. In the 5th paragraph of that Minute Sir Auckland Colvin writes:—

"If frontier communications are charged to capital, and not to revenue, a surplus of greater or less extent will appear upon our accounts. One of two things will then inevitably happen, either the departments will press for increased expenditure, and it will practically be impossible to resist proposals which, however objectionable, may, in view of such surplus, be plausibly put forward, or, in order to enforce economy, we shall be obliged to remit taxation. Bearing in mind the great remissions of taxation which have taken place during very recent years, and the peculiar dangers to which the Indian revenues are liable, the time has not yet come when we can with safety make further reductions. Reduction of taxation at the present time would, in my judgment, be a far less evil than profuse and needless expenditure, but, none the less, it would be premature, and, in view of the limited resources open to us in India, and of the unforeseen calls to which we are liable, very dangerous."

2 I gather from this statement that one of my Honourable Colleague's motives for desiring to meet the expenditure on frontier railways as far as possible out of revenue is, that he fears that, if he does not take that course, the arguments in favour of an immediate reduction of taxation will become irresistible. I am not as yet in a position to express any opinion as to whether the condition of our finances at the time of the preparation of the next Budget may

or may not permit taxation to be to any extent reduced, but I cannot think that it is desirable to make use of the opportunity afforded by the proposals to construct these railways, with a view to avoid a reduction of taxation which it might otherwise be in our power to make. There are still several taxes in existence in India which it would be very desirable to reduce or to abolish. Our present scale of court fees is fixed at a rate to which serious objections have been justly urged. The export duty on rice is contrary to sound economic principles, and has a peculiarly unfortunate operation in a country in which considerations connected with exchange are of great importance. It is my strong opinion that the salt duty ought to be farther reduced as soon as it approaches recovery from the results of the reduction made in 1862. And, lastly, the license tax is small in amount, but irritating in its effect, is altogether inelastic, and indeed diminishes steadily in its returns. At what time and in what manner these various imposts should be dealt with it is not for me now to say, but I do not think that we ought to abstain from adopting a course which has on other grounds much to recommend it, because its adoption might render it difficult to retain without very serious opposition taxation of this description. Of course such calamities as famine or war may at any time lead to vast additional expenditure, but the case of famine is supposed to be provided for by the arrangements connected with what has been called "famine insurance," and the outbreak of war produces a condition of things which is altogether exceptional, and which must be met by exceptional measures. I am therefore of opinion that, if the Government should at any time be possessed of an important surplus, it is undesirable that its freedom of dealing with it should be hampered by expenditure such as that contemplated in the present Despatch, and I hold that, in the event of the existence of such a surplus, reduction of taxation should occupy an important place among the different modes of disposing of it which should come under the consideration of the Government.

22 September 1884.

— No. 3 —

The Governor General of India in Council to the Secretary of State for India,
Simla, 29 September 1884; No. 150 (Railway).

My Lord,

We have had the honour to receive your Lordship's Despatch, No. 89 R, dated 14th August 1884, on the subject of the Report of the Select Committee of the House of Commons on Railway Communication in India, and its effect on our future railway policy.

2 We have observed with gratification, in addition to the points mentioned in the first clause of the second paragraph of the Despatch, the opinions of the Committee at paragraph 21 in favour of the broad gauge, at paragraph 33 that the 2½ millions limit of borrowing fixed in 1879 "might safely be enlarged," and at paragraph 29 that a fixed scale of expenditure should be maintained "over a considerable term of years."

The Committee's recommendation in paragraph 33, with reference to the responsibility for deciding what amounts may, with safety to the finances, be borrowed for Public Works, is identical with that of the Committee of 1879, so that our system established thereunder is not altered.

3. The dependence of the policy advocated in the Report upon the financial position of India, which is noticed in your Lordship's 3rd paragraph, is likewise in confirmation of the views of the Select Committee of 1879, who recommended "that the amount to be annually expended upon Productive Works should "mainly depend upon the financial condition of India." The recent Committee have, in their paragraph 33, virtually repeated the recommendation.

4. This

4. This recommendation of 1879 has always been held to refer to the average amount of borrowings as spread over a term of years, and not to the amount to be given during any particular year.

In forwarding to the Government of India the Report of the Parliamentary Committee of 1879, the Secretary of State used these words (No 420, of 23rd October 1879, paragraph 5) : " I desire that the annual expenditure on Productive Public Works from all sources be for the present restricted to the fixed sum of 2,500,000 l " His Lordship, in a further Despatch (No 444, of 13th November 1879, paragraph 13), observed that " it is not desirable to appropriate annually a larger sum than 2,500,000 l to public works for which it is not found possible to provide in your ordinary estimate " This second order was eventually explained in the Secretary of State's, No. 31 R., of 22nd February 1883, as extending the first, so as to allow surplus revenue, whether Provincial or Imperial, to be spent on Productive Public Works, *in addition* to the 2½ millions, which amount had been fixed as a limit of borrowing only.

Moreover, the Secretary of State decided in 1879 (No 485, of 11th December 1879, paragraph 7), and again in 1881 (No 1, of 6th January 1881, paragraph 6), that " the unspent balance of any one year may be re-allotted and added to " the 2½ millions of the succeeding year " The reason for this decision, in apparent antagonism with the ordinary budget system of absolute lapse of annual grants, was the admitted * waste and other evils involved in carrying on large public works with uncertain and fluctuating resources, together with the impossibility of so regulating home indent-, that the payments for them should fall in particular years. It has thus been the established practice for some years past to place a certain fixed *average* sum at the disposal of the Public Works Department, re-allotting unspent balances from year to year. That this policy should be maintained in future is the recommendation of the recent Committee —

* Government of India's No 319, of 2nd October 1879.
Secretary of State's No 485, of 11th December 1879.

" 29 The attention of your Committee has been called to the mischief occasioned by constant fluctuations of policy in the construction of railways, and they are of opinion that, a careful forecast having been made of future requirements for public works over a considerable term of years, such a scale of expenditure upon railways should be adopted as can reasonably be maintained."

5 It has likewise, however, been always recognised that the amount so fixed was liable, on the one hand, to periodic revision according to the general state of the finances, and on the other, to sudden curtailment, like the Provincial Contracts (Resolution of the Government of India, No 3353, Finance and Commerce, dated 30th September 1881), in the event of abnormal disaster. Thus the limit of 2½ millions was fixed by the Secretary of State, " until the " financial prospects of your Government are such as to enable you to calculate " with greater confidence the amount of the charges which may devolve upon " your revenues " (No 444, of 13th November 1879, paragraph 13), but expectations of its increase were more than once held out in subsequent Despatches, and the recent Committee have now advised that it may " safely be enlarged ".

We are prepared to accept the continuance of the existing system thus described, and subject to the distinct reservation above referred to. The forecast required in your Lordship's 8th paragraph, to which we shall presently allude, is put forward on this basis.

6 The remark in the 4th paragraph of the Despatch, as to " famine lines," refers, we presume, to our proposal regarding such protective lines as are technically " unproductive " . That proposal was that, " for the time being at all " events, " we should be allowed to apply to them " loan funds in aid of the " Famine Grant " to such extent as " the change may be made with a due regard " to financial prudence " . We held " that some limit must be assigned to capital " expenditure from funds borrowed by the State, on unprofitable lines of rail- " way, " and, " with a view to the solution of this question, " we classified all railway projects, showing in Schedule A (Indispensable Railways) only 10 millions for railways of the " unproductive " class, along with 18 millions for the " productive " . Our proposals thus may well be deemed to fulfil the condition of paragraph 28 of the Report, that " the bulk of the lines made should " be self-supporting " . Moreover the Committee have in that paragraph sup-
ported

ported our view that "the technical distinction which has hitherto been made between protective and productive lines cannot be maintained," and in paragraph 30 have said that the expenditure we propose "during the next six years is moderate," and that an extension "on the scale" we advocate "will have most beneficial effects." It would therefore seem that the Committee do not consider our proposals to be at variance with their recommendation. The change proposed in paragraph 9 of this Despatch will, however, reduce the proportion of "unproductive" lines to one-fourth of the whole, and will thus remove, we trust, whatever doubt may now be held to exist in the matter

7 We observe that the Committee have viewed unfavourably our proposal as to the hypothecation of the Famine Grant, and should have been glad to have been made acquainted with the grounds of their decisions. This hypothecation was undoubtedly a very important element in our scheme, but it was adopted, as stated in paragraph 47 of our Despatch, No. 29, of 23rd January 1883, by way of extreme caution. In the succeeding paragraphs proof is given that largely increased railway receipts may reasonably be expected, in paragraphs 15 and 16 of our Despatch, No. 27, of 29th January 1884, the same argument is pursued, and in the latter the Famine Insurance Grant is spoken of as a reserve. Finally, the enclosures to our Despatch, No. 121, of 28th April 1884, contain ample proof that the hypothecation of a part of the Famine Grant was by no means essential to the financial security of our scheme, which is perfectly able to stand without it.

8. Our answer to your Lordship's fifth paragraph consequently is that, for the reasons just given, the Committee's recommendations in their paragraphs 28 and 32 necessitate no change at all in the lines of railway included in Schedule A.

9 One change is, however, necessary for an independent reason. In paragraph 4 (f) of our Despatch, No. 9 R, of 22nd January 1884, we informed your Lordship that the Vizagapatam Raipur project did not improve on examination, that its commercial prospects were unfavourable, and its protective value small. This view has been so amply confirmed by the surveys of last cold season, that we think the line (355 miles; estimate 2,900,000 L.) must be struck out of Schedule A.

In substitution for it, the line undoubtedly possessing the best claim to insertion is the lower section of the Benares-Puri project, running from Kontera station, on the Nagpur-Bengal Railway, through Cuttack, to Puri. A reconnaissance of this was made in 1882-83, a more thorough survey in 1883-84, and the location will be completed during the current cold season. Much information regarding it has been published, and separately supplied to your Lordship, and the last year's reports are now under consideration. The length is put at 231 miles, and the cost at 2,523,000 L. This line was classified as "Protective and Productive," but was entered in Schedule B. for the reason explained in paragraph 20 of our Despatch No. 27, of 29th January 1884. The sanction of the Nagpur-Bengal Railway now renders possible the construction of the southern section of the whole project independently of the northern.

Its value as an additional protection to Orissa from famine is unquestioned. The Engineer-in-Chief estimates that it will derive 2 per cent. from the pilgrim traffic from the north alone, to which must be added that which will be brought to it from Western and Southern India by the Nagpur-Bengal Railway, and from the North-West and Punjab by the Bilaspur-Etawah line, as also a certain goods traffic, which ought to increase since the population is reported to have risen 31½ per cent. in the last 10 years. The Patna-Gya line pays from 5 to 6 per cent, chiefly from pilgrim traffic, so that it may safely be assumed that this project will pay 4 per cent. within about five years, and will thus be technically "productive."

The substitution of this Kontera-Puri line for the Vizagapatam-Raipur will reduce the "unproductive" lines in the schedule from 10 millions to about 7½ millions,

millions, which is a material change in the direction desired by the Committee in paragraph 28 that the bulk of the lines shall be self-supporting. After providing for it, there will be a balance of about 380,000 *l* over, which can go for the present towards the Kutni-Umeria section of the "productive" Bilaspur-Etawah Railway, which your Lordship has just sanctioned. Eventually, if

Despatches No. 99 and 109 of 27th June and 4th July 1884 the money be refunded by a company formed to construct the whole Bilaspur-Saugor Railway, it can be applied to some other short "productive" line in Schedule B.

10. We may here remark that, though we use the word "unproductive," the estimates of net receipts for the lines to which it is applied have been made on an extremely cautious basis, and will very probably be much exceeded in some cases. The Rewari-Ferozepore Railway, for instance, last year paid 1½ per cent on the whole outlay incurred, though only 80 miks out of 302 were open, and is now estimated to yield nearly 3 per cent. in the current year, though it will barely be completed.

11 In view of the Committee's opinion "that the technical distinction which has been hitherto made between protective and productive lines cannot be maintained," it is proposed, in paragraphs 6 and 7 of the Despatch under reply, to raise the annual grant for "famine," *i.e.*, "protective, but unproductive," lines by adding annually 500,000 *l* from borrowed funds to the same amount now assigned out of the Famine Grant. We beg to point out that a fixed allotment of this sort is somewhat questionable in principle, since the famine protection necessarily depends on the actual circumstances of the case, and also in practice, because the protective lines are those which we need the most urgently, and which ought therefore to be completed as soon as possible. If, however, about 7½ millions be allowed instead of the six proposed, and equal annual allotments be not insisted on, the necessary protection can be provided in the six years contemplated in the forecast appended to this Despatch, as will be seen from the extract in the margin

	Lakhs of Rupees
1st year - - - -	131
2nd " - - - -	150
3rd " - - - -	165
4th " - - - -	128
5th " - - - -	79
6th " - - - -	61
	726

This amount is distributed between eight railways, of which four are in progress and two more are extensions of the preceding, while six out of the eight are situated in the Madras Presidency. Considering the deficiency of famine protection by railway in that Presidency, and the risk of famine so often arising, we are not prepared to incur the grave responsibility of any reduction or delay in remedial measures. In illustration of this risk, we append a map,* supplied by our Revenue and Agricultural Department, which shows the precarious condition, at the present moment, of the tracts which these railways are designed to protect. We trust that, under this explanation, your Lordship will not object to the necessary amount being expended, and distributed between the several years, as shown in the forecast.

12 In the second part of paragraph 7 of the Despatch a suggestion is made, which we understand to mean that the net interest charge on the extra 500,000 *l*, which is offered for "unproductive" lines, shall be met out of a sum of 300,000 *l* per annum, which is supposed to be annually allotted from revenue (under the head of "State Railways not classed as Productive"), by means of the transfer of a portion of the item to some other head.

As a matter of fact, however, there is no such allotment, and we are not aware from what source the figure of 300,000 *l*. has been derived. The true allotments during the past 10 years have been only those shown marginally, which are the Imperial portion of the amounts given under item 40 at pages 60-61 of the last Financial Statement, and even out of these, about 700,000 *l*. have subsequently been transferred from this head to "Productive." Perhaps the fact has been overlooked that this item is mainly provincial.

After

* A copy of this map has been placed in the Library of the House of Commons.

After consultation with our Accountant General in the Public Works Department, we think there will be no possibility of providing, out of this item, for the interest on the whole extra grant for protective railways which is suggested in paragraph 11. A transfer of the preliminary survey charges of "productive" railways to the Productive Capital Account might yield a small sum, but only for two or three years or so, and to this we have no objection if your Lordship so desires. As, however, we shall presently explain that the annual interest charge for lines of all classes can be borne by the general revenue, a special provision of this sort appears hardly necessary.

13. To the 8th paragraph of the Despatch our broad answer is, that (except for the substitution of the Kontera Puri line, &c, as proposed in paragraph 9) your Lordship has already received, as Schedule A, the forecast required.

As, however, something more minute is probably desired, we have had the forecast now appended to this Despatch very carefully prepared by the Accountant General, Public Works Department, in consultation with the Director General of Railways as regards the distribution of allotments from a construction point of view. In this forecast all arrears of the productive grant up to date have been included, and also (for reasons to be presently stated) a provision for the commencement of the enlarged operations from the current year. The schedule will be exhausted in rather less than six years, as originally anticipated. We need scarcely add that such forecasts cannot be made absolutely reliable, and also that redistribution between one line and another, as usual, must take place according to the progress of each.

We must explain, however, that, in order to avoid new discussions at present, we have placed the provision for additional capital for open State Railways "inside" the annual grant, as hitherto, instead of "outside," as proposed in paragraph 18 of our Despatch, No 27, of 29th January 1884. On this point both the Committee and your Lordship are silent. But the inconveniences of this course, as also the difficulty of making any reliable forecast of outlay under this head, are undoubted, and cannot be better illustrated than by the fact that the recent development of railway traffic has brought on the current year a charge of no less than 100 lakhs, instead of the assumed normal 30 lakhs, which will eat up the whole of the arrears of the Productive Grant.

14. The inquiry in paragraph 9 needs consideration from two points of view.—

(a) Administratively, an increase to our funds in the current year is urgently required, because the heavy open line outlay above alluded to has proportionately diminished our funds for construction. Consequently, at a time when numerous projects are in hand in critical stages, and the expediency of "enlarged operations" is pointed out by the Committee and recognised by your Lordship, we have actually got 70 lakhs less available than would be normally at our disposal under the old system. Upon the economy of keeping our establishments employed up to their full working power, and of securing at the earliest possible date a return for outlay once embarked on, we need not enlarge.

(b) Financially, we have very carefully considered the situation, and also append a note by the Accountant General, Public Works Department, showing the probable additional annual outlay from year to year for interest which the adoption of the forecast will entail, and the views recently laid by Mr. Westland before the Select Committee as to the resources available for meeting it. We are of opinion that, provided your Lordship can arrange for the necessary funds, there is no financial objection to at once allotting additional grants for railway construction during the present year up to the amount of the arrears of the old normal Productive Grant now outstanding (61½ lakhs), together with the new normal increase of ₹50,000 l comprised in our original proposals. But, if this sum, or any portion of it, is granted for expenditure this year, in addition to grants already made, it will be necessary that your Lordship's total estimated

estimated drawings for the year should be reduced by an equal amount. In the forecast, the probable lapse and carrying forward to 1885-86 of 31 lakhs out of the 96½ lakhs has been anticipated, but, if it be held to be financially more convenient not to burden the coming year, the amount could be utilised this year by instalments for materials.

With regard to the future years which are embraced in the forecast, we can only say that, subject to the very distinct reservation already mentioned in paragraph 5, we see no reason to expect that the general revenues will not be fully able to bear the charge which the operations contemplated in the forecast will entail.

15 In reply to the concluding inquiry in paragraph 10, we beg to point out that in our original Despatch, No 29, of 23rd January 1883, we recommended that the lines mentioned marginally should be given to Companies, and that we also said, in paragraph 11 of our Despatch, No. 27, of 29th January 1884, that "it is of course understood that there would be no objection to handing over to 'construction and working' companies any of the lines entered as to be carried out by State agency." The lines comprised in Group I have already been arranged for with the Oudh and Rohilkhand and the Southern Mahratta Companies, and are virtually removed from our schedule. As to those in Group II, we have learned with much satisfaction that the two first-named are likely to be at once conceded to companies, and that the Jhansi-Manikpur and Etawah-Saugor lines will be comprised in the Bhopal system. We trust that similar concessions in the case of the Bilaspur-Saugor project (including the Kutni-Umeria section now provisionally commenced), and of the Ranaghat-Bhugwangola extension, may be possible at an early date. We have only to add that it does not appear desirable to hand over to companies other lines for which State agency is contemplated, unless a full fair share of the profits can be reserved to the Government.

It is hardly necessary for us to say that we have never contemplated any increase in our present permanent Public Works staff on account of the projects entered for State agency in Schedule A, and that in our Despatch on its reorganisation we acquiesced in the numerical reduction already contemplated.

16. In conclusion, we may state that we have telegraphed to your Lordship the substance of the more important recommendations in this Despatch, and solicit a very early reply, in order that no delay may occur in utilising, during the cold season just commencing, the additional grants proposed.

We have, &c

Ripon
D. M. Stewart
J. Gibbs.
T. F. Wilson
C. P. Ilbert.
S. C. Bayley
T. C. Hope
A. Colvin

Enclosure 1, in No 3

FORECAST OF RAILWAY CONSTRUCTION and OUTLAY, 1884-85 to 1889-90

Designation of Railway	Estimated Cost.	Outlay to end of 1888-84.	Amount needed to complete on 1st April 1884.	Existing Grant for 1884-85	WAYS AND MEANS.			PROPOSED NEW GRANTS IN LAKHS OF RUPEES					REMARKS		
					Normal Annual Grant	Arrears to be added to First Year	Other Assets for Sixth Year	Revised Grant, 1884-85.	1885-86	1886-87	1887-88	1888-89		1889-90	
1	2	3	4	5	6	7.	8.	9	10	11.	12.	13. ⁴	14.	15	
<i>Works in Progress</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>		
Wazirabad-Sialkot - - -	9,50,000	7,50,000	-	-	-	-	-	-	-	-	-	-	-	Line opened. Further outlay met under open Lines.	
Rewari-Ferozepore	Protective { 1,41,34,000	86,49,787	54,84,000	30,60,000	-	-	-	31	6	-	-	-	-	Saving anticipated.	
Jhansi-Manikpur		11,78,161	1,68,22,000	13,00,000	-	-	-	40	50	65	13	-	-		
Bellary-Kistna		1,77,50,000	8,32,027	1,68,18,000	34,21,000	-	-	-	40	50	55	23	-	-	
Cuddapah Nellore		36,84,000	2,78,146	33,91,000	12,78,000	1,80,00,000 old share of 24 millions	35,00,000 addition proposed.	50,00,000 share of famine Grant.	15	19	-	-	-	-	
Amritsar-Pathankot - - -		62,05,000	47,02,350	15,03,000	9,33,000	35,00,000	2,95,00,000	38,86,600 arrears of Protective Grant.	11	2	-	-	-	-	
Bareilly-Pilibhit - - -	17,50,000	9,65,381	7,85,000	3,26,500	-	-	-	3	-	-	-	-	-	Further outlay met from Provincial balances	
Dacca-Moensingh - - -	60,00,000	28,45,265	31,18,000	26,50,700	-	-	-	26	10	-	-	-	-	Probable excess	
Assam Behar															
1 Munaffarpur-Hajipur	22,00,000	18,28,897	9,71,000	3,25,000	-	-	-	-	-	-	-	-	-		
2 Sonapur-Hajipur - - -	14,20,000	5,49,189	2,11,21,000	34,10,000	-	-	-	47	50	40	40	38	-		
3 Jhinjarpur-Dumjpur - - -	1,46,50,000				-	-	-						-	-	
4 Munihari Branch - - -	-				-	-	-						-	-	
5 Kanna Duabri - - -	66,00,000				-	-	-						-	-	
Rangoon and Sittang - - -	1,17,00,000				90,69,275	26,20,000	22,10,000						-	-	-

CORRESPONDENCE RELATING TO THE REPORT OF THE

113	1	and Lines	7,80,000	47,50,000	10,00,000	10,00,000	-	-	-	-	-	-	-	-	10	-	-	-	-		
		Tanna Bridge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		Koondal Bhawan, Ja	-	2,64,118	-	-	20,000	-	-	-	-	-	-	-	-	-	-	-	-		
		TOTAL Works in Progress	10,88,02,991	-	7,26,42,000	-	-	-	-	-	-	-	-	-	246	195	150	76	38		
		Not Commenced																			
		Halisagar Extension (Bellary Kistna Railway) Protective	70,00,000	-	70,00,000	-	-	-	-	-	-	-	-	-	-	-	5	20	20	25	
		Kadiri Extension (Cuddapah Nellore Railway) Protective	85,00,000	-	85,00,000	-	-	-	-	-	-	-	-	-	5	15	25	30	10	-	
		Dauscheva-Villupuram } Minor Feeder Lines } Protective	84,00,000	-	84,00,000	-	-	-	-	-	-	-	-	-	-	10	25	30	19	-	
		Bezwarra to Frontier	25,00,000	-	25,00,000	-	-	-	-	-	-	-	-	-	-	-	15	11	-	-	
		Wareru-Chanda	35,00,000	-	35,00,000	-	-	-	-	-	-	-	-	-	-	-	-	-	10	25	
		Prome-Ailanmyo	37,50,000	-	37,50,000	-	-	-	-	-	-	-	-	-	-	-	-	-	10	28	
		Kontera-Puri	2,62,34,000	-	2,62,34,000	-	-	-	-	-	-	-	-	-	-	-	-	18	60	84	90
		Kalpi-Umaria Section of Bilaspur- Etawah	31,57,000	-	31,57,000	-	-	-	-	-	-	-	-	-	5	25	1	-	-	-	
		Nagpur-Bengal	-	-	-	-	10,00,000	-	-	-	-	-	-	-	20	20	-	-	-	-	
		Lawnore-Kalpi	-	-	-	-	5	-	-	-	-	-	-	-	5	5	-	-	-	-	
		Reserve	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Stores and Working Capital	70,00,000	-	70,00,000	-	-	-	-	-	-	-	-	-	-	8	-	9	20	33	
		TOTAL Works not Commenced	7,81,01,000	-	7,81,01,000	-	2,85,00,000	1,46,77,600	2,87,00,000	281	243	236	236	236	281	243	236	236	236	257	
		Extra Capital for open Lines	1,80,00,000	-	2,73,00,000	-	30,00,000	-	-	-	100	53	30	30	100	53	30	30	30	30	
		Balance carried forward	-	-	-	-	-	-	-	-	31	-	-	-	-	-	-	-	-	-	
		GRAND TOTAL - - Rs	20,40,03,991	-	17,74,43,000	-	2,65,00,000	1,46,77,600	2,87,00,000	412	300	266	266	266	412	300	266	266	266	287	

This line is in abeyance pending construction by the Bengal Central Company

Some changes in the proportionate distribution is probable.

Advances probably recoverable

SELECT COMMITTEE ON EAST INDIA RAILWAYS.

EXPLANATION.

1 The arrears due to the first year are as under, and should be shown as such in the column for that purpose, as "Arrears and Contribution to be added to First Year." We have actually received the contribution, and must bring it to account —

	<i>Rs</i>
(i) Arrears, Protective Grant - - - - -	38,86,600
(ii) „ Productive Grant - - - - -	21,96,000
(iii) „ „ „ - - - - -	10,85,000
(iv) „ „ „ - - - - -	58,03,000
(v) Lapses, 1883-84 - - - - -	3,44,000
(vi) Provincial Contribution - - - - -	13,63,000
Total - - - <i>Rs.</i>	1,46,77,600

say, 1,47,00,000 rupees in round numbers

- (i) Less Provincial Contribution of 25 lakhs to be refunded, allotted in Budget Orders
- (ii) Allotted in Budget Orders.
- (iii) Allotted in June and September
- (iv) Amount not yet allotted
- (v) Productive lapses, less Protective excess, not yet allotted
- (vi) Amount contributed by North Western Provinces to Productive Public Works, including 40,000 rupees just allotted.

2. If the 61,47,000 rupees of arrears not yet allotted were made available, and if in addition to this the total grant were increased from 1,80,00,000 rupees +50,00,000 = 2,30,00,000 rupees to 265 lakhs of rupees by adding 350,000 l, or 35 lakhs, as recommended in the Programme of the Government of India, the amount available for outlay this year would amount to 265 + 147, or 412 lakhs

3 Out of this the following additional grant to Railways under construction might be made. —

	<i>Lakhs</i>
Jhansi-Manikpur - - - - -	27
Bellary-Kistna - - - - -	5½
Cuddapah-Nellore - - - - -	2½
Amritsar-Pathankot - - - - -	2
Assam-Bihar - - - - -	10
Rangoon-Sittang Valley Railway - - - - -	2
Barrakur-Nagpur - - - - -	10
Kutni-Umeria - - - - -	5
Kadri-Extensaon - - - - -	5
Total - - -	69

This

This would increase the total grant for the year to the figures shown below—

REVISED GRANT, 1884-85

	<i>Lakhs.</i>
Lines under construction - - - - -	281
Open lines - - - - -	100
Total - - -	381
This would leave - - -	31

to be carried forward to 1885-6, and make the amount available for that year 265 + 31 lakhs, or 296 lakhs.

4 Supposing that in 1885-86 we recover the 20 lakhs and 5 lakhs expended this year on the Barrakur-Nagpur and the Cawnpore-Kalpi Railways respectively, then, after reserving 53 lakhs for open lines, which will probably be needed, we shall have 243 lakhs available for railways open for traffic. This sum is allotted in the column for 1885-86.

The grants for this and the following years are allocated as under —

	<i>Lakhs.</i>
1885-86	
Lines under construction - - - - -	260
Open lines - - - - -	53
Stores, increase - - - - -	8
Total - - -	321
Less recovery - - - - -	25
Total - - -	296
1886-87	
Lines under construction - - - - -	235
Open lines - - - - -	30
Total - - -	265
1887-88	
Lines under construction - - - - -	226
Stores, increase - - - - -	9
Open lines - - - - -	30
Total - - -	265
1888-89	
Lines under construction - - - - -	215
Stores, increase - - - - -	20
Open lines - - - - -	30
Total - - -	265

In 1889 we shall want, to complete the schedule.—

	<i>Lakhs.</i>
Lines under construction - - - - -	224
Stores - - - - -	33
Open lines - - - - -	30
Total - - -	287

To meet this 287 lakhs, we shall have the 63,00,000 rupees recovered from the Barrakur-Nagpur Railway, and shall want a normal grant of 224 lakhs.

5. The figures in the second column of this forecast may be reconciled with those in the Despatch, No 27 F & C, of 29th January 1884, in the following manner :—

	Rs.	Rs.
Total, Column 2 - - - -	-	20,49,04,000
<i>Deduct—</i>		
Excess on Amritsar-Pathankot Railway - - - -	2,05,000	
Excess* on Farakhabad Hathras Railway - - - -	1,70,000	
Konera-Puri Railway - - - -	2,52,34,000	
Kutni-Umaria Section, Bilaspur-Etawah Railway - - - -	31,57,000	
Open lines, sixth year - - - -	30,00,000	
		3,17,66,000
		17,31,38,000
<i>Add—</i>		
Vizagapatam-Raipur Railway - - - -	2,90,00,000	
Bansapur-Hamirbar Railway - - - -	30,00,000	
Western Deccan Railway - - - -	1,80,00,000	
Ranaghat-Bhugwangola Railway - - - -	81,00,000	
Bhopal-Gwalior-Cawnpore Railway - - - -	3,50,00,000	
Barrakur-Nagpur Railway - - - -	5,30,00,000	
Bilaspur Etawah Railway - - - -	2,45,00,000	
		17,06,00,000
<i>Deduct—</i>		34,37,38,000
Amount to be spent to end of 1883-84 as at foot of revised Schedule A - - - -		3,91,11,350
	Rs	30,46,26,650

Amount shown in paragraph 11 of Despatch, No 27, of 29th January 1884 —

	Conventional Sterling
	£
Total of Schedule A - - - - -	28,282,000
Working and surplus stores on projected railway - - - -	700,000
Additional Capital outlay on open State Railways (for 5 years) - - - - -	1,500,000
	£ 30,462,000

The two thus correspond, taking even thousands of pounds.

15 September 1884.

A. J. Filgate

I have examined carefully the distribution of the grants shown in the preceding forecast between the several projects named, and consider that they are appropriate from a "construction" point of view.

17 September 1884

F. S. Stanton.

* This excess is due to the construction of the Bathoor Branch recently sanctioned

Enclosure 2, in No 3

NOTE ON WAYS and MEANS by the ACCOUNTANT GENERAL, PUBLIC WORKS DEPARTMENT.

1. On page 309 of the Evidence given before the recent Parliamentary Committee on Railways in India, Mr. Westland estimates that the surplus revenue may be expected to increase at the rate of 41,40,000 rupees each year, and that, even if the exchange were to fall a farthing each year, the annual gain on the *present financial position* would be 19,40,000 rupees.

He assumes the present financial position at a surplus of 48,00,000 rupees a year.

2. The above figures do not take account of arrangements with the civil funds, which may be expected to have the immediate effect of relieving the Revenue Accounts, for many years to come, of about 20 to 25 lakhs a year, and of arrangements for the payment of non effective charges to the War Office, which will relieve the Revenue Accounts, for a few years at least, of 400,000 l. to 500,000 l. sterling

3 These figures, moreover, include the entire reservation of 1½ crores of rupees for Famine Insurance. Mr. Westland further states that the figures he has laid before the Committee may be taken as a safe estimate of the revenue and expenditure, and a low estimate of opium.

4 On this estimate, Mr. Westland comes to the conclusion, (*vide page 311*) that Government can carry out their programme for railway extension, and still have a surplus as under —

1st year	-	-	-	-	-	-	-	-	-	38 lakhs.
2nd "	-	-	-	-	-	-	-	-	-	39 "
3rd "	-	-	-	-	-	-	-	-	-	41 "
4th "	-	-	-	-	-	-	-	-	-	46 "
5th "	-	-	-	-	-	-	-	-	-	55 "

5 The interest payable on the proposals in the accompanying forecast, in excess of the interest payable on the existing annual grant of 2½ crores of rupees for Productive Public Works, will be as under :—

	Rs	Rs
ADDITIONAL OUTLAY from LOAN proposed in 1884-85		
Arrears under Productive Public Works grant - - -	68,88,000	
Additional productive grant - - - - -	35,00,000	
Total - - -	1,03,88,000	
Less carried forward to 1885-86 - - - - -	31,00,000	
Additional capital outlay, 1884-85 - - - - -	72,88,000	
Interest on one-half of this at 4 per cent. - - - - -	-	1,45,760
<hr/>		
1885-86	Rs	
Arrears - - - - -	31,00,000	
Additional grant - - - - -	35,00,000	
66,00,000		
One-half of this is - - - - -	33,00,000	
Total additional outlay bearing interest at 4 per cent. during 1885-86 - - - - -	1,05,88,000	
Interest thereon - - - - -	-	4,23,520

	Rs.	Rs.
1886-87.		
One-half of additional outlay, 1885-86, which will bear full interest in 1886-87 - - - - -	Rs. 33,00,000	
One-half additional outlay, 1886-87, which will bear full interest in that year - - - - -	17,50,000	
	50,50,000	
Total additional outlay bearing interest at 4 per cent. during 1886-87 - - - - -	1,56,38,000	
Interest thereon - - - - -		6,25,520
1887-88		
Similarly one-half additional outlay, 1886-87, plus one-half additional outlay, 1887-88 - - - - -	65,00,000	
Total additional outlay bearing full interest, 1887-88 - - - - -	1,21,38,000	
Interest thereon - - - - -		7,85,520
1888-89:		
Similarly one-half additional outlay, 1887-88, plus one-half additional outlay, 1888-89 - - - - -	65,00,000	
Total additional outlay bearing full interest, 1888-89 - - - - -	2,26,38,000	
Interest thereon - - - - -		9,06,520
1889-90.		
One-half additional outlay, 1888-89, bearing full interest during 1889-90 - - - - -	17,50,000	
Total additional capital bearing full interest 1889-90 - - - - -	2,43,88,000	
Interest thereon - - - - -		9,75,520

6 The actual additional charge for interest on State loans over that under the present system will be—

	at 2 per cent on	Rs.	Rs.
In 1884-85 - - - - -		35,00,000	or 70,000
" 1885-86 - - - - -	" 4 " "	52,50,000	" 2,10,000
" 1886-87 - - - - -	" 4 " "	87,50,000	" 3,50,000
" 1887-88 - - - - -	" 4 " "	1,22,50,000	" 4,90,000
" 1888-89 - - - - -	" 4 " "	1,57,50,000	" 6,30,000
" 1889-90 - - - - -	" 4 " "	1,75,00,000	" 7,00,000

The difference between the interest shown in this paragraph and that shown in paragraph 5 is due to the interest on the arrears of the Productive Public Works allotment, not assigned in the Budget Estimate of 1884-85, viz., 68,88,000 rupees

7. The net interest charge on the three great projects to be given to Companies may be taken broadly at the figures shown marginally, which are extracted from the full estimate given in paragraph 35 of the Government of India's Despatch, No 29, of 23rd January 1883

1st year - - - - -	85,000
2nd " - - - - -	157,600
3rd " - - - - -	210,000
4th " - - - - -	350,000
5th " - - - - -	254,000
6th " - - - - -	160,000

17 September 1884.

A. J. Filgate

The Secretary of State for India to the Governor General of India in Council,
27 November 1884; No. 148 (Railway)*

My Lord Marquis,

Par 1 I HAVE considered in Council your Excellency's letter, dated the 22nd of September, No 25 (Secret), with a Minute by Sir Auckland Colvin, concurred in by Mr. Ilbert and Sir Stewart Bayley, and the first two paragraphs of your Excellency's Minute of the 22nd of September, dealing with a proposal to construct certain railways and military roads for the purpose of placing the north-west frontier, of India in a satisfactory condition of defence. I have at the same time taken into consideration your letter of the 29th of September, No. 150 (Railway), giving the views of your Government on the general question of railway communication in India, after receiving the Report of the Select Committee of the House of Commons, which examined the subject during the last Session of Parliament

2 In the latter letter your Excellency makes no allusion to the frontier communications, and in the earlier letter you state that your decision on the general question is in no way affected by the admitted necessity for such works, and that, having to contend against the two evils of famine and complications on the north-west frontier, you are of opinion that "the protection from both should certainly be provided concurrently and to the full extent necessary in the case of each"

3 I regret that I am unable to concur with your Government as to the manner of effecting these objects. I am of opinion that it is a prudent and a really economical measure, to plan and to carry into execution, with as little delay as possible, a system of railways and roads designed to strengthen our military position on the north-west frontier, and also that it is desirable to complete a well-devised scheme for preserving the country from the effects of famine, and for increasing the facilities for commerce. But the rapidity with which the works necessary for these purposes shall be constructed must manifestly depend on financial considerations. Whatever be the object with which a great system of railroads is undertaken, whether for the protection of the country from famine or from war, the effect must be the same as regards the money market, the strength of the Public Works Establishment, the demand for labour, and the increase of prices, and hence I have thought it right to treat your Excellency's two letters as forming one comprehensive scheme for the extension of railways in India.

4 Your consideration of the Report of the Select Committee has not led you materially to modify the views that you had previously expressed. You have now removed from the category of railways that you deem indispensable the one from Vizagapatam to Raipur, and you have substituted for it one from Kontera through Cuttack to Puri. With this exception, however, you adhere to Schedule (A), which accompanied your letter of the 29th of January 1884, No 27, as representing the lines that you desire to see constructed by the Government during the next six years, which are thus divided in the forecast accompanying your letter of the 29th of September —

	Estimated Cost	Outlay to End of 1883-84	Amount needed to complete on 1st April 1884
	<i>Rs</i>	<i>Rs</i>	<i>Rs</i>
Works in progress - - -	10,88,02,991	* about 3,67,80,991	7,20,43,000
Not commenced - - -	7,81,01,000	- - - -	7,81,01,000
Extra capital for open lines - -	1,80,00,000	- - - -	2,78,00,000
	20,49,03,991	- - - -	17,74,43,000
[To which must be now added the Frontier communications.]	5,05,00,000	- - - -	5,05,00,000
	25,54,03,991	- - - -	22,79,43,000

These projects do not include the undertakings that it is intended to intrust to private companies working with Government assistance, the cost of which, in your letter of the 28th. January 1883, No 29, was estimated at about 12,23,00,000 rupees.

5 The scheme of frontier communications described in your letter of the 22nd of September, appears to me to be well adapted to the purpose that you have in view, and I desire to express, not merely my general concurrence in its adoption, but my hope that it will be completed within the four years over which your Excellency proposes to spread the expenditure. The line to which your efforts are naturally being first directed is the Sind-Pishin Railway

6. Accepting the estimates for these works, I find that, in the two forecasts which accompany your letters, it is proposed to incur the following expenditure by Government on railways, and on other public works constructed from borrowed money.—

Works.	1884-85	1885-86	1886-87	1887-88	1888-89	1889-90	TOTAL of Six Years
	Lakhs	Lakhs.	Lakhs.	Lakhs	Lakhs	Lakhs.	Lakhs
General Railways	381	598	265	265	266	287	1,769
Frontier Railways	118	225	80	25	-	-	448
TOTAL Railway Expenditure after 31st March 1884	499	823	345	290	266	287	2,202
Of which to be provided from Famine Insurance Grants.	111	50	50	50	50	50	361
Ditto from Provincial Contributions and Lapses.	17	-	-	-	-	-	17
Ditto, recovery from Nagpur-Chhattisgarh Line.	-	-	-	-	-	68	68
	128	50	50	50	50	118	441
Leaving the amount to be borrowed for Railways	366	471	295	240	215	174	1,761
To which add the amount to be borrowed for Irrigation	70	70	70	70	70	70	420
And for Military Roads, and past expenditure on the Sind-Pishin line.	12	18	28	9	-	-	67
Making the Total to be borrowed for Public Works.	448	559	393	319	285	244	2,248

7 From the total of 2,243 lakhs, which in the six years it is proposed to charge against borrowed money, I find it necessary at the outset to make certain deductions. I cannot admit the propriety of so treating the past expenditure on the Sind-Pishin Railway in 1883-84 - - - - - 12½ lakhs.

The special grant made in the Budget of 1884-85 for the Harnai Road (included in the 113 lakhs for this year on frontier railroads) - - - - - 7½ "

Or the outlay on the military roads - - - - - 50 "

69½ "

The whole of these 69½ lakhs must be treated as charges on revenue, thus reducing the aggregate that may possibly have to be obtained by borrowing to 2,174 lakhs.

8. In the 11th paragraph of your letter of the 22nd of September, you say that "funds must obviously be supplied according to the nature of the works, "and

“and not in equal annual instalments” Although this remark is sound when applied to a particular work, it does not apply to a scheme comprising a number of projects, some of which can without difficulty be delayed if the expenditure on others is unusually heavy

9 The amount which, in recent years, it has been considered right to borrow, when necessary, for Productive Public Works, has been 250 lakhs a year, supplemented occasionally by the sums needed for the completion of the East Indian Railway Your Excellency proposes to add to this amount 35 lakhs a year for railways, as well as to borrow in the present year about 69 lakhs on account of arrears of Productive Works, and you also desire to construct the whole of the frontier communications by means of loans On this subject I concur in the opinion of Sir Auckland Colvin, rather than that which has been adopted by the majority of your Council, and I think it most undesirable to show a surplus of revenue over expenditure, by failing to charge each year with whatever portion of the necessary expenditure it can bear, and which is properly chargeable thereto, while I hold that it would be unsound and dangerous to remit taxation on the strength of a nominal surplus so obtained At the same time, really urgent works should not be delayed, by refraining from raising reasonable amounts by loans when requisite for their completion within a specific time. The course that I am of opinion should be pursued is, that the frontier communications should be completed with the utmost speed, consistent with economy of construction, that as far as possible their cost should be provided from revenue; but that, when the revenue available after meeting other essential charges of administration is exhausted, your Government should not allow the proposed works to be retarded, but should prosecute them with borrowed money

10 In my Despatch of the 14th of August, No 89 (Railway), I referred to the Select Committee's recommendation that the technical distinction between productive and protective lines should not be maintained, but that the bulk of the lines undertaken should be self-supporting, and I stated my willingness to authorise an addition to the amount of the annual loan of about 400,000 *l* or 500,000 *l*, especially for famine lines In view of the urgency of the requirements that you have now brought to notice, I sanction, for the present, the extension of the maximum limit of borrowing to 350 lakhs in any one year, which seems to me the extreme limit to which it is prudent to pledge our resources for such purposes, and accordingly this amount must be held to cover all the expenditure of the Public Works Department from borrowed money, whether for ordinary railways and irrigation, open lines, arrears of previous grants, protective works, frontier communications, or any other purpose, while lapses in previous years should only be subsequently made good from the balances if that is practicable without unduly reducing them, and no resort must be had to borrowing unless the amount cannot be provided from revenue

11 I would further remark that there is an important difference between the works now specially referred to and those for which it has heretofore been held to be legitimate to provide funds by borrowing, viz, that the outlay on the latter class may be properly regarded as an investment on which there is reason to anticipate a return which eventually will meet the interest on the borrowed money required for them This character, as you recognise, will not necessarily apply to the railways and other public works designed for the military protection of the frontier, and the necessity for limiting, as far as possible, the permanent charge they will bring on the revenues in future years is obvious.

12 I find that in the five years from 1879-80 to 1883-84 (excluding, on the one hand, the increase of debt caused by the purchase of the East Indian Railway, and, on the other hand, the decrease arising from the operations of the Commission for the Reduction of Debt), the Rupee Debt was increased by 1,526 lakhs, while the Sterling Debt has been reduced by 2,018,000 *l*, equal, at 1 *s* 8 *d* the rupee to 242 lakhs, the amount of borrowed money, therefore, which has been at the disposal of your Government during the last five years has been 1,284 lakhs, or an average of 257 lakhs annually The sanction now conveyed to you will enable you, if you find it really necessary, to add to your funds for public works from borrowed money very nearly a crore of rupees in each year, and the total

total amount of 2,100 lakhs in the six years is very nearly equal to the aggregate of 2,174 lakhs, which I have above shown to be the extreme sum admissible as a charge upon the debt.

13. If, however, as is probable, your Government may not have at your command in the earlier years the amounts that you desire, some reduction must be made, and I am of opinion that it should not fall upon the frontier lines, although I doubt if the whole expenditure contemplated in 1884-85 and 1885-86 will be incurred during those years. Until the funds can be provided, the expenditure on works in Schedule A must be restricted accordingly, and I leave it to your Excellency to decide the best manner of rearranging the expenditure on the lines already sanctioned.

14. In so doing, it will be necessary for you to bear in mind the recommendation of the Select Committee, already cited, that the bulk of the lines under taken should be self-supporting. According to paragraphs 6 and 9 of your Excellency's letter of the 29th of September, your general scheme includes 2,800 lakhs of outlay, of which about 725 are for unproductive lines, with the addition of the frontier railroads, the amounts become 3,250 and 1,175 lakhs respectively.

15. While thus enlarging your powers of borrowing for the works the urgency of which is recognised, I must also impress upon you the necessity for regarding any available surplus of revenue over the ordinary expenditure as being primarily applicable to meeting the exceptional charges which your Government is now called upon to bear, and the consequent importance of using every effort to avoid all expenditure usually classed as ordinary which is not strictly necessary. In ordinary public works, and in all branches of administration, the utmost economy should be practised, and the Provincial Governments, as well as the departments more directly under your own orders, should be enjoined to co-operate in the endeavour to keep their expenditure within the limits of strict economy, so that the unavoidable demands upon your Government for services which cannot be postponed may, when they arise, be met as far as possible from the revenues of the year, and the necessity for adding to the debt may be to the same extent avoided.

16. The question whether the money shall be borrowed in India or in England is one that can only be decided from time to time according to the circumstances. In my Despatch of the 15th of May, No 131 (Financial), I communicated my decision to relieve you of the necessity of borrowing in India this year, by reducing the drawings to the extent of 250 lakhs, and my telegram of the 3rd of September accepted your proposal for a further temporary reduction of 65 lakhs. If your Excellency should be of opinion that you can economically spend the full 350 lakhs from borrowed money this year, I shall be prepared to make a further reduction of 35 lakhs, but, as that will involve a total addition to the sterling debt of nearly 3,000,000 £ in this year, I refrain from any alteration of the amount to be drawn until I learn your opinion on the point.

17. Your Excellency proposes, as a ground for providing the whole outlay on frontier communications from borrowed money, to place the loan on a distinct basis, which may provide for the discharge of the capital obligation within a term of years. The objection to the institution of an ordinary sinking fund for the extinction of a particular loan, at the same time that other loans are continually being raised, is manifest, the payment in reduction of the earlier debt can only be provided by adding to the new debt, and it is much less wasteful to lessen the amount of fresh borrowing. Moreover, the sinking fund in such a case would be sure to be suspended, on the first pressure arising from famine or war. Your Excellency, however, would prefer to raise the money by terminable annuities, on which I need only observe that such a scheme appears to me impracticable on any reasonable terms, considering the total absence of demand for such securities in India, the relatively low price which the Annuities of the East Indian Railway and Eastern Bengal Railway actually command in the London market, and the extent to which that market has been, and may hereafter be, called upon to accept them from time to time as the Guaranteed Railways are purchased by the Government.

18 The charge for interest on the debt to be incurred must, therefore, I fear, be treated as permanent, and, in so far as the amount is borrowed in this country, there will be the great disadvantage that the interest will have to be added to the large sum at present needed for the home disbursements. This is an additional reason why the increase of the debt, and especially the sterling debt, should be kept within the strictest limits. To the interest payable on the sums directly borrowed, moreover, may have to be added a considerable charge for interest as a consequence of the arrangements now under discussion with the promoters of private companies for the construction of railways, and, as the returns from the various lines as they come into operation will be necessarily received in India, the burden created by the increased charge for interest in this country will not be diminished.

I have, &c.

Kimberley.

EAST INDIA (RAILWAY
COMMUNICATION COMMITTEE)

COPY of CORRESPONDENCE between the Secretary of State and the Government of *India*, on the Subject of the REPORT of the SELECT COMMITTEE of 1884 ON EAST INDIA RAILWAY COMMUNICATION.

(*Mr. Kynaston Cross*)

Ordered, by The House of Commons, to be Printed,
12 March 1885.

[*Price 1 d.*]