

REPORT

THE TELEGRAPH COMMITTEE,

1906-07.



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**RESOLUTION OF THE GOVERNMENT OF INDIA IN THE DEPARTMENT OF
COMMERCE AND INDUSTRY, No. 7550-7575—88 (TELEGRAPH ESTABLISH-
MENT), DATED SIMLA, THE 25TH SEPTEMBER 1906.**

For some time past the organisation and work of the Telegraph Department in all its branches have been occupying the close attention of the Government of India. From the time when construction first began in 1850-51 the history of the Department covers a period of a little more than half a century, during which Telegraph Officers have rendered admirable services to the State, and have shown themselves second to none in public spirit and *esprit de corps*. In the Mutiny of 1857 their work was of incalculable value, and in more recent times they have again and again proved their devotion to duty and their power of overcoming the gravest physical difficulties during the Afghan War, in Burma, in frontier expeditions and in Tibet. In the less trying circumstances of the every day work of the Department their achievements have not been less excellent. In fifty-five years the number of miles of open line has risen from nothing to 64,730, the number of miles of wire from nothing to 243,840, and the number of paid messages now exceeds ten millions in the year. Successive reductions of the charges for all classes of telegrams have placed telegraph facilities within the reach of all, and the Government of India believe that the efficiency of the service is thoroughly appreciated by the public. It is a record of which the Department may well be proud, and it may be confidently anticipated that the future will not be unworthy of the past.

2. But, if this is to be accomplished, it is essential that the Department should not be handicapped by obsolete methods or faulty organisation. The continuous growth of the Department yearly increases the strain on every branch of the service, magnifies the scale of operations, and tests the adequacy of the established methods of work and administration. The expansion of the work, which has always been rapid, has in recent years become enormous. Traffic has gone up by leaps and bounds, and with commercial and industrial development and the spread of education the rate of progress must be expected to increase in the future. The organisation which was suitable in the infancy of the Department, and has proved itself equal to the care of its vigorous youth, cannot be expected without modification to meet fully the requirements of its maturity. Mere multiplication of establishment without an effort to understand what the conditions are, and to provide for them appropriately is no remedy, and must in the end be absolutely fatal both to economy and efficiency. New conditions call for new methods, fresh problems demand appropriate solutions, and traffic on an unprecedented scale must be disposed of by other methods than have hitherto sufficed. It is for this reason that the Government of India deem it necessary to review the work of the Telegraph Department in all its branches and to examine the manner of recruitment, the mode of work, and the distribution of responsibility amongst the various authorities. From the need of a periodical examination of its organisation and duties no service is exempt, and in the case of the Telegraph Department the increase of work renders it imperative that the task should be no longer postponed, if it is to do justice to the reasonable expectation of the public and to its own past history.

3. One particular respect may be mentioned in which the need for reform is specially urgent. So long as the Department was comparatively small, it could be administered conveniently and efficiently from one centre under the immediate personal control of a single head ; but the time when this could be done is already past. In the year 1904 when an increase of establishment in the Director's Office was applied for, the Government of India were impressed by the immense volume of the work with which the Direction was burdened, and the number and variety of the questions (some of them of the most trivial character) with which the Director-General was expected to deal. An experienced officer of the Accounts Department, Lieutenant-Colonel Waller, was deputed to inspect the head office and to formulate proposals for the relief of the head of the Department from all questions of a routine character, and all matters of minor importance, the disposal of which might safely be entrusted to subordinate authority. Lieutenant-Colonel Waller in his report entirely confirmed the impression which the Government of India had already formed that the Direction was over-burdened and in urgent need of relief, and he also drew attention to the defective organisation of the Department, by which no less than twenty-eight separate offices were immediately subordinate to the Director-General. He therefore advocated the grouping of the Telegraph Divisions in several great Circles of control, and the creation of a grade of officers intermediate between the Director-General and the Divisional Superintendents, to whom much larger powers could be delegated than could safely be entrusted to Superintendents. These recommendations were approved by the Government of India, and a small Departmental Committee was constituted to prepare a detailed scheme of decentralisation. The proposals of the Committee were considered to be generally suitable, but, before final orders could be passed, it became necessary to postpone a decision, until the prior question of the amalgamation of the Post Office and Telegraph Departments had been settled.

4. The decision arrived at with regard to amalgamation was made public by the Hon'ble Mr. Hewett in his speech in the Budget Debate on the 28th March 1906, and to the conclusions then expressed the Government of India adhere. Amalgamation could only be justified if it could be shown that it would result in a financial saving without loss of efficiency ; or that it would secure increased efficiency with a similar standard of expenditure. The organisation of the two Departments at the present time is entirely different, and without a radical change in the Telegraph Department amalgamation could not possibly be attempted. Reorganisation must therefore in any case precede amalgamation, and may in view of the special conditions prevailing in India render it unnecessary, provided that the work of the two Departments be properly co-ordinated. In the work of co-ordination progress has already been made, and will be continued under the control of the Department of the Government of India to which both services are subordinate ; and the principle that post and telegraph offices should be combined, wherever possible, should be steadily enforced. Not fusion, therefore, but co-ordination is the policy which the Government of India have adopted as suitable for the present time and as conducive under existing conditions to efficiency and economy.

5. The scheme of decentralisation submitted by the Departmental Committee provided for the constitution of six Circles each in charge of a single officer, for the delegation to these officers of large powers and for the reorganisation of

the staff of the Direction and its office establishment. Some system of this kind the Government of India regard as indispensably necessary, not only in order to leave the Director-General free to devote more time to the more serious problems of administration, though the importance of this can hardly be overrated, but also to afford an opportunity to the officers of the Department to acquire a sound training in administrative work, which under the present system they have small chance of obtaining. The scheme which has been prepared has been drawn up on thoroughly sound lines, and will, the Government of India think, be found to be generally suitable, but it is not possible to proceed at once to its introduction. In certain minor respects it requires further examination in the light of what has occurred since the Committee sat. It is thought, for example, that if possible, Telegraph and Postal Circles should be coterminous, not merely because amalgamation must remain a possibility of the future, but also because, if the system of combined offices is to be extended, it is essential to harmonious working that the jurisdictions of the various Divisions of the two Departments should not overlap.

6. But there is another and more cogent reason for postponing the introduction of the scheme. Facts which have recently come before the Government of India, and especially those elicited in the inquiries made regarding the question of amalgamation, point to the conclusion that decentralisation by itself will not suffice to place the Department on a sound basis, and that more comprehensive measures are called for. There is reason to believe that, on the one hand, highly paid officers, who have received an elaborate technical training, are sometimes employed in work of a routine character, which could equally well be performed by officers without special training, and on lower pay, while, on the other hand, the system is not fitted to turn out men with the requisite experience and training in matters where special knowledge is essential. The work done by a Telegraph Officer during the earlier stages of his career (*e.g.*, when he is in charge of a Sub-Division) is exactly the same as that performed by Sub-Assistant Superintendents whose qualifications are far inferior. It would appear therefore that for sub-divisional work proper the special technical training which officers of the Superior Staff receive is not required. On the other hand although Assistant Superintendents have every chance of making themselves experts in construction work, they seldom have an opportunity to acquire by practical experience a full knowledge of the vitally important matter of traffic working, nor have they been always encouraged to devote themselves to the scientific study required to qualify them for dealing with modern developments of telegraphy. It ought therefore to be considered whether the present distribution of duties amongst the higher officers of the Department might not be improved with advantageous result both to economy and efficiency. It should be decided how many officers are required for strictly scientific work, how many for construction and maintenance, and how many for traffic. To the total number thus arrived at must be added the proper proportion of junior officers, who may be considered as still under instruction, and it has to be determined how they can be most usefully employed both in the interests of the Department and with a view to their own training. The decentralisation scheme necessarily involves some readjustment of the higher appointments and the time is opportune for a complete settlement of the whole question.

7. The organisation and duties of the Upper Subordinate Establishment are inseparably connected with those of the Superior Staff, and any radical

change in the one involves some corresponding modification in the other. Sub-Assistant Superintendents are at present recruited by promotion from the ranks of the Signalling Staff; and they are employed partly in traffic work in the larger offices, partly as Sub-Divisional officers, and partly on construction, while a few are attached to the offices of Divisional Superintendents and Sub-Divisional officers. Their duties are thus somewhat various and call for qualifications of diverse kinds, but it is not clear that they receive any systematic training to fit them for their work. The Government of India believe that considerable improvements might be effected in their recruitment and training, and that the question should be fully considered. Any scheme of reform must necessarily include a consideration of the duties which this class of officer may properly be called on to perform.

8. In an earlier paragraph reference has been made to the important bearing which a proper control over traffic working has upon the efficient and economical administration of the Department. The object for which the whole system ultimately exists is the prompt transmission of messages at as low a cost as possible, but the problems of traffic working are essentially of an administrative character, and, as already pointed out, Telegraph Officers have not at present sufficient facilities for becoming experts in this particular. Experience in other countries has shown that, when the increase of messages reaches a certain stage, it is absolutely necessary in the interests of economy to employ special officers, working directly under the head-quarters office, to make detailed examinations and to devise improvements in this branch of work. The Government of India are disposed to consider favourably the employment of special officers of this kind in India, and in order that full advantage may be taken of the experience gained elsewhere, it has been suggested that, as a beginning, an expert Traffic Officer should be obtained from England for a limited period to inspect the system in this country and to advise Government as to its improvement. The Government of India are inclined to believe that the introduction of new ideas by this means would prove advantageous to the Department but it will suffice at present merely to note the suggestion as one which should be further considered.

9. Intimately connected with Traffic Administration is the question of the organisation of the Signalling Establishment. This question was considered by the Departmental Committee which sat in 1904, and definite proposals were submitted to Government; but the difficulties connected with the subject are very great, and no final decision has yet been arrived at. Meanwhile the rapid growth of work has made further postponement a direct invitation to serious failure. In 1902-03, the increase in the total operations over the previous year was 5 per cent., in 1903-04, 7·6 per cent., in 1904-05, 24·17 per cent. (this enormous rise being no doubt due to the reduction in the rates) and in 1905-06, 14·97 per cent. Nor is there any reason to think that the movement has spent its force. Large additions have from time to time been made to the Signalling Establishment, but it is obvious that, unless the Department is to be worked at a loss, the process cannot be continued indefinitely. The growth of work must be partly met by a rise in efficiency, and an improvement in the outturn of the individual signaller. That the present average outturn, in spite of some improvement which has taken place recently, is far below what it might be, and is absurdly low when compared with the results obtained in other countries does not admit of doubt. The Government of India understand that in Belgium telegraphists serving on a line constantly worked can produce on

the Morse apparatus thirty or thirty-five telegrams an hour, and that smart operators may do even forty-five and fifty. In England the standard average of twenty-four telegrams per operator per hour is insisted on, and if that is not reached explanations are called for. On some circuits of course the rate goes below twenty-four but on a constantly fed main wire a standard of forty or fifty messages an hour is frequently attained. In India the average outturn in combined and departmental offices together does not amount to six messages per hour, while from figures submitted by the Director-General, it appears that in fourteen of the principal Departmental offices the average outturn per diem amounted in 1905 to fifty-six messages per man or seven per hour. It is possible that widely different conditions may make the English standard impossible of attainment in India, but that an improvement can and ought to be made is clear.

10. In order to improve the outturn of work a system has been tentatively introduced in some of the larger offices, by which all signallers, who exceed a certain minimum number of messages in a day, receive additional remuneration in proportion to the excess number of messages disposed of. From this system of "pie money" or from some similar system, the Government of India look for important results. When a signaller's earnings are directly dependent on the amount of work he does, it is reasonable to expect that he will exert himself and endeavour to do his best. On the other hand when the idle and industrious are paid alike, no man has any motive to do more than his neighbour, and an inevitable tendency exists for all to sink to the same dead level of production. The "pie money" system has already produced a decided improvement where it has been brought into force, but there are a number of details which cannot be settled without further examination, *e.g.*, the standard number of messages which a signaller may fairly be expected to attain before extra emolument is earned, and the precise form of the system which will be best suited to the needs of the Department. It will be necessary to consider how far signallers should be remunerated by fixed salaries and how far by earnings proportionate to the amount of work done. A scheme by which all signallers would receive a fixed subsistence allowance, an additional remuneration for each message despatched, would have distinct advantages, for the earnings of every man beyond the fixed minimum would be automatically regulated by the amount of work done, and signallers would have every incentive to exert themselves to the utmost. An additional advantage would be that the present cumbrous and inconvenient classification of signallers as Superior, Good, Average and Indifferent would be got rid of and the necessity for periodical testing examinations removed. The Government of India are unable to say at present how far it would be safe to go in this direction, but the matter merits full investigation.

11. There are other questions connected with the organisation of the Signalling Establishment besides that of the mode of remuneration. It has been found increasingly difficult to obtain recruits in sufficient numbers, or of the standard of physique and education which is desirable, and it appears clear that an effort must be made to widen the field of recruitment. Two measures have been suggested with this object, of which one aims at the reduction of the number of General Service men in the Department (*i.e.*, those liable to service in any part of India), and the establishment at the Presidency towns

and possibly at some other large centres, of purely local non-pensionable services, while the other contemplates the employment of female telegraphists. Both these suggestions are worthy of serious consideration, and it may, the Government of India think, be possible to give effect to them.

Finally the rate of expansion which has prevailed recently in the Department has forced on the notice of Government the necessity of devising some scheme for the automatic increase of establishment in proportion to the actual increase of traffic, provision being made for the increase of controlling establishment in defined proportion to the increase in lower grades. Government are not always in a good position to decide whether an increase is required or not, and so far as possible the system should be made self-regulating, if this can be done with due regard to the interests of economy.

12. In connection with the relations of the Telegraph Department to the Post Office allusion has already been made to the question of combined offices. This is a matter which the Government of India regard as of the greatest importance to economical administration. They consider that the principle of combining Post and Telegraph offices wherever possible should be steadily enforced; new departmental offices should be opened only when the necessity cannot be avoided, while in the case of existing offices, it should be considered to what extent combination can be effected. It will be necessary however to examine the matter carefully, and to lay down the principles which should regulate the policy of Government in dealing with individual cases.

In another respect the relations of the two Departments might be closer, *viz.*, the Accounts system. In most European countries, though the extent to which the Departments are amalgamated varies, it has been found possible and desirable to effect a complete combination of the Accounts administration. It is not possible to say at present whether this would be practicable in India and whether the advantages to be derived from the amalgamation, if feasible, are sufficient to make the change advisable. But the Government of India consider that the matter should be fully investigated.

13. The questions which have been raised in the foregoing paragraphs are of very considerable importance, and demand full examination. The Government of India have therefore decided to appoint a Committee to consider them and certain other minor matters which have not been specifically referred to, and to advise Government as to the course which should be followed. The Committee will consist of the following gentlemen:—

President :

SIR LEWIS TUPPER, K.C.I.E., C.S.I., I.C.S.

Members :

MR. L. A. S. PORTER, C.S.I., I.C.S.

MR. E. A. LBAOH, Indian Telegraph Department,
Deputy Director-General of Telegraphs.

MR. W. MAXWELL, I.C.S., Postmaster-General, Punjab.

MR. R. O. LEEB, Indian Telegraph Department.

MR. P. T. B. KELLNER, Public Works Department, Accounts.

Secretary :

MR. G. RAINY, I.C.S.

14. The points which the Committee will investigate are the following :—

- (1) Whether the scheme of decentralisation drawn up by the Departmental Committee of 1904 may be adopted, as it stands, or whether any, and if so what, modifications are necessary.
- (2) What alterations should be made in the staff and office establishment of the Direction, if the decentralisation scheme is adopted.
- (3) Whether the existing organisation of the Superior Staff of the Department and the distribution of the work is satisfactory, and if not what alterations should be made : in particular whether a clearer distinction should be made between (a) administration, traffic and inspection on the one hand, and (b) construction and engineering on the other.
- (4) Whether the existing system of recruitment, training and duties of the Upper Subordinate establishment is satisfactory and if not what changes should be made.
- (5) Whether an expert Traffic Officer should be brought out from England to examine the traffic working of the Department and to make suggestions for its improvement.

NOTE.—If the Committee find they are in a position to recommend the immediate appointment of an expert they should submit detailed proposals to Government at as early a date as possible in anticipation of their report.

- (6) What measures should be taken to promote closer and more intimate relations between the Post Office and the Telegraph Department in the matter of combined offices, and what principles should govern (a) the opening of new departmental offices, and (b) the combining of offices already separate.
- (7) Whether the accounts and audit system of the Telegraph Department should be amalgamated with that of the Post Office.
- (8) Whether any and if so what changes are required in the existing organisation of the Check Office in view of the expansion of message traffic, and in particular—
 - (a) whether any part of the work can be transferred to any Accounts Department; and
 - (b) whether any part of the work can be decentralised and transferred to the Circle Officers whom it is proposed to create.
- (9) What changes should be made to improve the existing organisation of the signalling establishment and in particular—
 - (a) whether strictly local and non-pensionable services should be formed in the Presidency towns and other large centres ;
 - (b) whether female signallers should be employed in the Department and if so to what extent and under what restrictions ; and
 - (c) what alterations should be made in the present mode of classification and remuneration of signallers, and to what extent their earnings should be regulated by their actual outturn of work by the general introduction of 'pie-money' or some similar system.
- (10) Whether a scheme can be devised for the automatic increase of the signalling establishment in proportion to the actual increase in

traffic, the strength of the controlling establishment being increased in fixed proportion to the increase in the lower grades.

- (11) Whether any and if so what changes are called for in the existing Stores system of the Telegraph Department.
- (12) Whether it is advisable to decentralise the work of the Department to a larger extent in great cities.

The Committee are not limited by the terms of the reference to the specific questions indicated, but are free to take up any matter connected with the main object of their appointment, which is to submit proposals for the improved organisation of the Indian Telegraph Department in all its branches. Any defects in working or suggestions for improvements which may come to their notice should be carefully considered, and so far as necessary, appropriate proposals should be made.

15. The Committee, or as many of their number as are able to take up their duties by that date, will assemble at Simla on the 28th September. From the 1st of November onwards the head-quarters of the Committee will be at Calcutta but from two to three months will be spent on tour. The members will visit important mercantile cities and other places at their discretion, where their inquiries and inspections are likely to be useful. The Government of India trust that Local Governments will afford them all the assistance which they may require, and comply with any requests for information and advice which may be addressed to them by the Committee through their Secretary. In addition to Telegraph officials the Committee will be at liberty to take the evidence of members of mercantile firms by which the telegraph is largely used, who may be willing to give evidence, as also of officers in Government offices who have any considerable experience of the despatch and receipt of telegrams. The Committee should submit its Report in six months or earlier if practicable.

ORDERED that a copy of this Resolution be forwarded to all Local Governments and Administrations, to the Home, Finance and Public Works Departments, to the Director-General of the Post Office in India, to the Director-General of Telegraphs and to the President and Members of the Committee.

ORDERED also, that it be published in the Supplement to the *Gazette of India*, for general information.

REPORT
OF
THE TELEGRAPH COMMITTEE.

CHAPTER I.

INTRODUCTION.

Assumption of charge by the Committee.

IN compliance with the instructions communicated to them in the Resolution of the Government of India in the Department of Commerce and Industry, No. 7550-7575—88, dated the 25th September 1906, the President and Secretary and Messrs. Porter, Maxwell and Kellner entered on their duties on the 28th of that month. The Telegraph Officers, Messrs. Leach and Lees, who were on leave in England at the time the Committee were appointed, did not arrive at Simla until the 18th October. Pending their arrival the Director-General of Telegraphs, Sir Sydney Hutchinson, took a very prominent share in the deliberations of the Committee and favoured us with much informal advice of great value.

Tours.

2. After the preliminary discussions had been completed we left Simla on the 27th October and proceeded on a tour which lasted for more than four months, and during the course of which we visited all the most important telegraph centres in India and Burma. A list of the places visited will be found in Appendix A to this Report. Owing to the amount of ground to be covered and the limited time at our disposal it was necessary on several occasions to divide the Committee into two parties so that no office might be omitted which it was desirable that some of us should see. The places * visited by the Committee as a whole were Karachi, Bombay, Madras, Calcutta, Rangoon, Delhi and Agra. The others were visited by sections of the Committee consisting of two or three members.

Method of Inquiry.

3. Before the Committee left Simla questions were framed on all the subjects regarding which the Committee desired to obtain the advice of officers of the Telegraph Department and others. These have been printed and will be found in Appendix B to this Report. To these questions written replies were received in each case from the officers to whom they were sent, and the written answers were supplemented in as many cases as possible by oral examination. At every place visited written memoranda containing the representations of the Signalling Establishment were laid before the Committee by delegates elected by the staff, and these memoranda were fully discussed with the delegates at our meetings. Petitions were also received in various places from the clerks in signal offices and in the offices of Divisional and Sub-Divisional Officers, from Task Work messengers, office peons and members of the line establishment. Personal interviews were accorded to the representatives of these classes of employés in exceptional cases only. At every place which we

* At Madras the President, and at Karachi and Rangoon Mr. Porter, were unable to be present with the Committee.

visited where there was a Chamber of Commerce, representatives of the Chamber were invited to meet the Committee for the discussion of subjects in which the commercial community were interested. The invitation was invariably accepted with cordiality; and written memoranda were in each case prepared by the Chambers beforehand to serve as the basis for discussion. We desire to acknowledge the great assistance which we received from our interviews with the representatives of the Chambers; and the readiness with which their advice and suggestions were placed at our disposal. At places where important newspapers are published, members of the staff were present at some of our meetings and favoured us with information and remarks of which we cordially acknowledge the value in connection with our work. At the end of our tour all the most important signal offices in India and Burma, the Store Depôts, the Workshops and the Check Office had been visited either by all or some of the members of the Committee. In all, 150 meetings were held of which 53 were attended by the members of the Committee only. When, as often happened, two sittings were held on the same day each has been reckoned as a separate meeting.

**Proceedings of
the Committee.**

4. The proceedings of the Committee are voluminous and it has not been thought necessary to incorporate them in the Report. Where documents handed in have been unimportant or where printed copies were supplied, it has been decided not to print or reprint them. Sixteen copies of the proceedings are submitted for record in the Department of Commerce and Industry. Of these only one set is complete; the rest are incomplete for want of spare copies of documents either unprinted, or not considered of sufficient value to justify the cost of the print or reprint. The Parts have been arranged according to locality, all the proceedings of meetings held at Simla and the connected documents being included in Part I, those at Karachi in Part II, and so on. Where the documents connected with localities visited successively were few the proceedings at several places have been brought together and included in one Part. Where any document has had to be omitted in any set of the proceedings the omission with the reasons for it and a note of the pages where it occurs in the complete set are entered on a separate page in the proper place. In this way the pages in all of the sets submitted have been made to bear the same numbering. These proceedings are intended for reference and record only, not for publication, nor is it necessary that they should be perused at length by the Government of India. The Report is written so as to be complete in itself without reference to other documents, but references are given, when necessary, both to correspondence and to the proceedings in case the Government of India, when examining the Report, should desire to enter upon more detail than the Report itself supplies.

CHAPTER II.

THE CIRCLE SCHEME, THE SUPERIOR STAFF AND THE UPPER SUBORDINATES.

5. (i) The first two points which, by paragraph 14 of the Resolution of the 25th September 1906, we have been directed to investigate are :—

(1) *Whether the scheme of decentralisation drawn up by the Departmental Committee of 1904 may be adopted as it stands, or whether any, and if so what, modifications are necessary.*

(2) *What alterations should be made in the staff and office establishment of the Direction, if the decentralisation scheme is adopted.*

These subjects can most conveniently be discussed together.

(ii) In 1904 Lieutenant-Colonel Waller, who inspected the office of the Director-General of Telegraphs, noticed that the Director-General was in direct official correspondence with as many as twenty-eight subordinate officers, and proposed that the country should be divided into telegraph controlling Circles in charge of officers intermediate between the Director-General and the Superintendents, in order to relieve the former of a mass of unimportant references and to enable him to devote all his time to the larger questions of administration and policy which constantly arise in the Department. The Government of India approved of this recommendation and appointed a Committee, consisting of Messrs. leMaistre and Thomas, to prepare a scheme of decentralisation. In the scheme which was drawn up by those officers it was proposed to create six Circles distributed in such a way as to keep, where possible, the whole of each Railway system within one Circle; to invest the officers in charge of the Circles with large powers; and to reorganise the staff and clerical establishment of the Direction.

(iii) After a careful consideration of this scheme we are of opinion that it should be adopted with certain modifications which we think are necessary. The first of these modifications is that the Telegraph Circles should correspond as nearly as practicable with provincial limits, and should ultimately be exactly coterminous with the Postal Circles.* The evidence which we have received has satisfied us that the Telegraph Department has more important work with the Post Office in connection with combined offices than with railways, and that the work with the Post Office is likely to increase at a very rapid rate. We are further satisfied that it is not practicable to arrange the Telegraph Circles so that each railway should be entirely included in a single Circle; that no serious inconvenience will result from an arrangement under which part of a railway would remain in one Circle and part in another; and that the advantages of distributing the Telegraph Circles in accordance with the boundaries of provinces and Postal Circles far outweigh those which might result from an arrangement made on the basis of railways.

* We discussed this modification with Messrs. leMaistre and Thomas and they fully accepted it, *vide* Part VIII, Volume I of the Proceedings of the Committee, page 157. At the same meeting the whole Circle scheme, including the formation of eight Circles and the abolition of Sub-Divisions, was fully explained to these officers. They offered no criticism and expressly said that they saw no objections to our proposals. *Ibid*, pages 156, 157 and 168.

(iv) We consider that there should be eight instead of six Telegraph Circles and that they should comprise the following tracts of country :—

BENGAL	. The Province of Bengal.
BOMBAY	. The Bombay Presidency, including Sind and a portion of Rajputana.
BURMA .	. The Province of Burma.
CENTRAL PRO- VINCES.	The Chief Commissionership of the Central Provinces, the Central India Agency and a portion of Rajputana.
E A S T E R N BENGAL.	The Province of Eastern Bengal and Assam.
MADRAS	. The Madras Presidency with Mysore and Hyderabad.
PUNJAB .	. The Punjab, North-West Frontier Province, Baluchistan, Kashmir and a portion of Rajputana.
UNITED PRO- VINCES.	The United Provinces and a portion of Rajputana.

We append as an annexure a map * showing the distribution of Circles in the manner now proposed.

(v) We understand from the Director-General of the Post Office, that there are at present seven major and three minor Postal Circles, and that on the abolition of the latter, which is under contemplation, there will be eight Postal Circles corresponding exactly with the eight Telegraph Circles the formation of which we recommend. If, however, the boundaries of the eight major Circles differ eventually from those proposed by us, there will be no difficulty in re-adjusting the Telegraph Circles on the same basis.

The eight Circles recommended include one for the Central Provinces.

6. (i) The question has been closely examined whether it is possible to divide the country into seven Circles for the present, the eighth to be created at some later period, and we are strongly of opinion that it is not advisable to inaugurate the scheme with less than eight Circles. We recognise that the Central Provinces Circle will be a lighter charge than any of the others for some years to come, but these provinces are rapidly developing in commercial importance, their area is extensive and travelling difficult, and the allotment of this tract to one or more of the neighbouring Circles would add unduly to the work of the Circle Officers. Moreover, we consider that it is highly undesirable to depart from the general principle of our scheme which aims at establishing the closest relations between the Local Governments and the Telegraph Circle Officers on the one hand, and between the Telegraph Department and the Post Office on the other ; and we are of opinion that there should be a high Telegraph Officer, as well as a high Postal authority, at the head-quarters of this important Local Administration.

(ii) It might, of course, be arranged to place this Circle under the control of a Superintendent at first ; but this measure, which would not result in any considerable saving, would entail serious administrative inconvenience. The officer appointed to the charge of this Circle would usually be on the eve of promotion to the higher appointments and changes of incumbency would therefore be frequent. It might happen, moreover, that a junior officer would be placed in a position where it would be his duty to control his seniors, but without any rise in rank or increase in emoluments. Taking into view the expected growth of traffic, the intended expansion of combined offices and the probable or certain extension of railways in the Central Provinces, we hold that the charge fully justifies the appointment of a Circle Officer and will afford him ample scope for useful work. As regards the remaining seven Circles it does

* In pocket.

not appear that any doubt of the necessity for a separate charge for each can be entertained. Moreover, seven Circle charges can be filled from the existing staff down to and including the Chief Superintendents ; and it is mainly because an additional officer of administrative rank will be required for the eighth Circle that we have explained at length our reasons for proposing it.

Circle Directors and Directors of Traffic and Construction.

7. (i) In the Direction there should be a Director of Traffic and a Director of Construction as recommended by the Departmental Committee ; and in our opinion the officers in charge of Telegraph Circles should be styled Directors of Telegraphs and should be graded with the Directors of Traffic and Construction, all these posts being interchangeable. The tenure of the appointments of Director of Traffic and Director of Construction should be limited to three years, so that these officers may keep in touch with the practical work of Circles, and that Circle Officers may in turn be afforded the opportunity of gaining experience in the Direction. This arrangement, enabling the Director-General to select officers for the appointments for which they are best fitted, will be a great improvement on the existing system under which an officer becomes the Director of Traffic or Construction with reference rather to his seniority than to his special fitness for that particular class of work. The objection has been raised that under this proposal a senior officer who is Director of a Circle might receive orders from a junior working in the Direction as Director of Traffic or Construction ; but to this objection we attach no importance, as all orders from the Direction should be issued in the name of the Director-General ; and it should be laid down that a Circle Officer cannot be overruled by an officer other than the Director-General. The advantages of a system by which the Direction will be manned by officers who are fresh from the practical work of Circles, and Circle Officers will be given an opportunity of a training in the Direction, seem to us to outweigh all other considerations.

(ii) The Directors of Circles will be responsible for the general administration of their Circles and for the efficient traffic working of all lines and offices under their control ; and here we may mention that in our opinion the whole subject of so controlling and supervising traffic arrangements as to ensure that the best possible service is rendered to the public with the minimum waste of force in the Department, is of such paramount importance that no officer should be selected for the appointment of Director of a Circle or Director of Traffic who has not given evidence of his aptitude for traffic administration. The Telegraph Department exists for the purpose of transmitting telegrams with the greatest possible speed, and the efforts of all the officers of the Department should be directed towards the attainment of this object. For this reason the Directors of Circles should spend a large portion of their time on tours of inspection, to ascertain for themselves where alterations and improvements in working are required, and to consult with and advise the Superintendents, Traffic Sub-Assistants and Telegraph Masters on all subjects of importance which arise. One of the chief duties of the Circle Officer will be the prompt and thorough inquiry into complaints received by him from the public. In the same way it should be incumbent on the Director of Traffic to visit the different Circles every year, for the purpose of discussing with Circle Officers and Superintendents the larger questions of administration and traffic which come up for decision.

(iii) Further, we attach much importance to the suggestion that periodical conferences of the Directors of Circles and the Directors of Traffic and Construction should be held for the consideration of important problems affecting

the Department ; and we think that for the first few years after the introduction of the Circle Scheme it will be advisable to hold such meetings annually.

(iv) The relations between the Circle Officer and the Postal head of the Circle should be of the closest character so as to ensure the efficient working of combined offices and the fullest co-operation between the two Departments.

(v) A duty of the Circle Officer which deserves special notice will be the control of establishment. We shall propose* to invest him with considerable powers over his subordinates, and the careful exercise of these powers will ensure that the number of transfers in the Signalling Establishment shall be kept as low as possible, that the work done by all classes of subordinates shall be closely supervised, and that the selection of candidates for the service and of officials for promotion shall be properly made.

8. (i) In addition to the Directors of Traffic and Construction there should be attached to the head-quarters office a Personal Assistant to the Director-General who should not be of higher rank than a Superintendent, and whose tenure of office should, as a rule, be limited to three years for reasons similar to those mentioned in paragraph 7 (i). Two Assistant Superintendents should be posted to the same office to work under the Directors of Traffic and Construction, respectively. In their case also the tenure of office should be subject to the same limitation.

(ii) We are of opinion that the clerical establishment recommended for the Direction by the Departmental Committee † will prove adequate ; and we think that the reductions proposed should be carried out gradually as the Circle Scheme is brought into effect. These remarks dispose of the memorial of the clerical establishment forwarded to Government with Sir Sydney Hutchinson's letter No. 184 E. T., dated the 22nd August 1906, which has been referred to us for consideration.

9. As at present, there should be four appointments of Superintendents in charge of the Calcutta, Bombay, Madras and Agra Offices, and these officers should be directly subordinate to the Directors of Circles. In separate parts of this Report we have recommended that the appointments of Superintendent of the Check Office, Electrician, and Superintendent of Stores, should cease to be considered as Superintendents' charges. The appointment of Superintendent of the Workshops may, we think, remain a Superintendent's charge so long as there is an officer of the Department qualified to hold it. Should it, however, become necessary to appoint an officer from outside the Department, he would probably have to be brought out from home and it would be necessary to fix for him a special rate of pay.

10. (i) Our next proposal is of a very far-reaching character involving a radical change in the existing organisation of the Department. Excluding the four large offices the whole country is now apportioned into 20 Divisions under the control of Superintendents, but the unit of administration is the Sub-Division, of which there are 73, in charge of Assistant or Sub-Assistant Superintendents. In the course of our tours we ascertained that a large portion of the time of the Sub-Divisional Officer and the Superintendent of the Division is occupied with mutual correspondence on matters of which most could easily be settled at once by personal discussion, if the officers now employed in Sub-Divisions were relieved of their separate charges and posted to the Division as the Superintendent's assistants.

The staff and office establishment of the Direction.

Certain charges of Superintendents.

Proposal to make the Division the unit of charge and to abolish Sub-Divisions.

* *Vide* Appendix F and paragraph 19 below.

† A proposition statement showing the reduction of establishment is included in Appendix D.

(ii) The majority of Sub-Divisions are at present held by Sub-Assistant Superintendents and we have received a mass of evidence which supports the inference that these officers would perform their duties more efficiently if they worked under the immediate control of the Superintendents. The administrative difficulties which arise from these officers being in direct official communication with the Railway Administrations, the Post Office and other Departments, would cease if the Superintendent were the medium of communication and all references were issued by him. The advantages of making the Superintendent directly responsible for the expeditious disposal of traffic and for the administration of his Division in every branch are obvious.

(iii) We found that, apart from the question of maintaining Sub-Divisions on the existing basis, the Divisions generally are far too large to be effectively supervised by the Superintendents, and that it is absolutely necessary to reduce their extent if the close control that is essential to good administration and efficient traffic arrangements is to be exercised.

(iv) Accordingly we recommend that the number of Divisions should be increased from 20 to 34 and that the officers who are now in charge of Sub-Divisions should be attached to the Division as assistants to the Superintendent and should carry out their duties under his direct control. These officers could, as at present, be entrusted with the charge of specified portions of Divisions, or should the circumstances of the Divisions indicate this course to be the more suitable, special branches of the administrative work of the Divisions, *e.g.*, traffic or construction, might be assigned to them. Under this arrangement, the Superintendent could depute his assistants to the particular classes of work for which they were specially fitted, maintain a closer check on their actions than is now possible and at the same time keep himself more intimately acquainted with the working of his Division in every branch.

(v) Generally we believe that the reorganisation here proposed would save much duplication of work and correspondence; and, by relieving both the Superintendent and his assistants of much laborious accounting and other office work, would place them all in a position to devote far more time to inspections and inquiries than is possible under the existing system. This important change, though not approved by the Director-General himself, was supported by a considerable majority of the Officers of the Department whom we examined, and we have no hesitation in recommending its adoption on the condition that the number of Divisions is increased as proposed.

(vi) We are satisfied that under no other system will it be possible to administer the Department efficiently with the existing staff of Superior Officers. The appointment of Circle Officers will reduce greatly the amount of work which now falls on the Direction; but it will bring no relief to Divisional and Sub-Divisional Officers. If both Sub-Divisional and Divisional Officers were retained while Circle Officers were created, a fresh link would be added to the official chain and business would be more delayed than under the present centralised system.

(vii) If this is admitted the alternatives are to abolish either the Divisions or the Sub-Divisions. The abolition of the Sub-Divisions seems much the better plan, because (1) the responsible nature of the work which will devolve on the immediate subordinates of the Circle Officer makes it essential that they should

as soon as possible be of the rank of Superintendents ; (2) were we to substitute Sub-Divisions for Divisions we should have in direct communication with the Circle Officers at least twice as many officers as under our proposal, and thus reproduce in each Circle one of the admitted defects of the existing organisation in the country at large ; (3) Superintendents, Assistant Superintendents and Sub-Assistant Superintendents would all be employed on the same class of work which would be a great waste of power ; and (4) we should fail to give effect to a main principle of our scheme which is to take as a model, so far as it can be suitably adopted, the general type of Indian civil administration, and to assign to the Divisional Superintendent and his assistants round him a place analogous to that of the District Officer and his staff. It has been objected that if Sub-Divisions be abolished, Assistant Superintendents will lack training in initiative, self-reliance and acceptance of responsibility ; but our answer is that it would be the duty of the Divisional Superintendent to see that this danger shall not arise by regulating the responsibilities of any Assistant Superintendent under him in proportion to his experience and capacity. It has not been found in the civil administration that Assistant Collectors or Assistant Commissioners fail in these respects, when promoted to District charge ; and we fully believe that Assistant Superintendents, if properly guided by Divisional Superintendents and suitably entrusted with authority, will develop these essentials of character in a like degree. For all these reasons we would make the Division the unit of charge within the Circle rather than the Sub-Division.

(viii) Additional reasons for the same course are derived from our anticipations of the future. We understand that with the existing strength of the Superior Staff difficulty is at times experienced in finding suitable officers for the charge of Sub-Divisions. With the opening of more telegraph offices, and the steady growth of traffic, the number of these Sub-Divisions, some of which are already unwieldy, would increase, and the difficulty of efficiently manning them would become more acute. The only alternative to the scheme which we propose would therefore be a considerable addition to the number of Assistant Superintendents—a measure costly in itself and open to grave objection, because it would overweight the lower grades of the Department and raise an obstacle to promotion to independent charge at a suitable period of service. Thus the argument from future economy tells in favour of making the Division the unit of administration. As work increased, it would not be necessary to add proportionately to the Superior Staff, because much of the less important work in the Division, *e.g.*, the inspection of the smaller combined offices, and the supervision of simple construction and maintenance works, could be entrusted to subordinate agencies of various kinds.

(ix) It has occasionally been put forward as an objection to the abolition of Sub-Divisions that the concentration of the Officers and Upper Subordinates of the Department in a smaller number of centres may lead to difficulty and delay on the occurrence of interruptions, because it will take longer for an officer to reach the scene of the break-down. This is not an argument to which we attach weight. One of the most important objects which we hope to attain by the abolition of Sub-Divisions is to relieve officers of part of the correspondence and routine work with which they are overburdened, and to set them free to perform a much greater amount of inspection and touring than they can do at present. The object of our scheme would be completely

frustrated if it led to the constant presence at the Divisional head-quarters of the Superintendent and his staff. If, however, experience shows that it is necessary to station at some outlying point an official who can be trusted to carry out petty works or repairs, the case should usually be met, not by posting an officer of the Divisional staff permanently at that point, but by stationing a first grade Sub-Inspector or an Inspecting Telegraph Master there. This is in accordance with the principle that Superior Officers (other than those who are merely learning their duties) should not be employed on work which can be performed with equal efficiency by a cheaper agency. In order, however, to make due provision for cases of an exceptional nature the Circle Officer should be authorised to station one of the assistants in a Division temporarily at any place in that Division where he found this measure necessary owing to constant interruptions of communication on a particular section of line; but the term of such posting should not exceed six months.

Sub-Divisional
allowances.

11. (i) It will be convenient to refer here to one of the consequences of the abolition of Sub-Divisions. At present Sub-Assistant Superintendents while in charge of Sub-Divisions receive a charge allowance of Rs. 30 per mensem, but under the Circle Scheme there will be no Sub-Divisions and, in the absence of special orders, the obvious consequence would be that the allowances would cease. We think, however, that this would hardly be fair to present incumbents, as the probability of drawing this allowance is one of the attractions of the General Branch and an inducement to join it, and we consider that present incumbents have an equitable claim either to the continuance in some form of this allowance or to compensation for its loss.

(ii) We have ascertained from the Examiner that the cost of these allowances amounted to Rs. 13,490 in 1904, Rs. 14,085 in 1905 and Rs. 13,492 in 1906, or an average for the three years of Rs. 13,689 or Rs. 1,140 per mensem. This last figure is equivalent to 38 allowances of Rs. 30 and implies that of the 72 Sub-Assistant Superintendents, General Branch, 38 only on the average draw the allowance. Further Rs. 1,140 per mensem is equivalent to an allowance of Rs. 15.84 to each of the 72 Sub-Assistants.

(iii) Various methods have been suggested by which these allowances may be continued. One is to grant the allowance to all Sub-Assistants who may be posted, under the new scheme, as assistants to Divisional Superintendents. There will, however, be 60 such assistants, whereas on the average there have been only 38 allowances as just stated; so this proposal must be rejected on grounds of economy and because it goes beyond the necessities of the case. Another method is to continue the allowance to those men who may actually be drawing it when the new scheme is introduced. This is open to the objection that men would lose it who had been drawing it for years, but owing to absence on special construction duty, or on leave or for other like reasons were not drawing it at the particular time. A third method would be to distribute the allowance over the whole 72 men. It has been argued that as no Sub-Assistant can claim to be kept in a Sub-Division in order that he may draw the allowance, no individual among them has a vested interest in any such allowance, though a claim of the kind on the part of the Sub-Assistants as a body may be reasonable; that the contention that this allowance was an inducement to the men to join the General Branch may support the grant of it to all the 72 men, but not to a proportion of them only; and that all that can be claimed by each individual is the equivalent of his chance of drawing the allowance. For these reasons it is represented that the fairest way is to

distribute an equivalent sum over the 72 men, utilising this amount to improve the pay of the whole body.

(iv) After a careful examination of all these proposals we have come to the conclusion that the fairest method will be to place a certain number of allowances of Rs. 30 per mensem at the disposal of the Director-General of Telegraphs, and to authorise him to select the Honorary Assistant Superintendents and Sub-Assistants General who should draw them. He would make his selection with due regard to the actual employment of individuals at the date when the Circle Scheme comes into force, and to the length of time prior to the introduction of the scheme during which the several claimants may have drawn the allowance.

(v) It is possible that more Sub-Divisions may be formed in the interval before the Circle Scheme is put into operation, and certain that more would of necessity be formed in the future if that scheme were not adopted; and we think a larger number of allowances than 38 should be given. Accordingly we recommend that forty such allowances be placed at the disposal of the Director-General; that no Honorary Assistant Superintendent or Sub-Assistant should be eligible for an allowance unless he held that rank when the Circle Scheme was introduced, and unless he is posted as assistant to a Divisional Superintendent; and that as these men retire, die or are promoted, the number of these allowances should be so reduced that the ratio which it bears to the number of the surviving Honorary Assistant Superintendents and Sub-Assistants, who held that rank at the time of the introduction of the Circle Scheme, shall be constant. The effect of this arrangement will be the gradual cessation of these allowances, their ultimate loss to the staff and a saving of expenditure to the Department. Moreover, under the system of selection proposed some men actually in receipt of the allowance at the moment of the change will not retain it; and the whole arrangement is admittedly a temporary one open to the criticism that it continues (though for a time only) allowances originally granted for charges which will no longer exist.

(vi) Notwithstanding these objections we think that this plan will best meet a very real difficulty; more particularly because present incumbents undoubtedly expect that in some form or other the allowances will be continued to them. If, however, these objections are held to be fatal to our proposal, we would fall back, as an alternative, on the third method mentioned above. The present grades of Sub-Assistant Superintendents General are, as stated in paragraph 43(ii) below :—

2nd grade Rs. 250—5—275, mean pay Rs. 266½.

1st grade Rs. 275—15—350, mean pay Rs. 325.

If, therefore, the estimated value of each individual's claim, *viz.*, Rs. 15·84, be added to the mean pay, the emoluments would be raised to Rs. 282½ and Rs. 340·84, and the following revised grading could be accepted :—

2nd grade Rs. 250—10—300, mean pay Rs. 283½.

1st grade Rs. 300—12—360, mean pay Rs. 340.

The additional expense of this grading would be Rs. 1,140, or exactly equal to the average cost of the present allowances.

(vii) The objections to this proposal are that the increases are not uniform in the two grades; that men will benefit though they are not doing work which exactly corresponds to that for which the allowance is now given; and

that it will have the effect of reducing the emoluments of some who have been drawing the allowance for a considerable time for the benefit of others who have not so drawn it and, from the nature of the work on which they are employed, are not likely to draw it. Under the existing procedure Sub-Divisions are entrusted in preference to the senior men, as is shown by the fact that of the 36 allowances drawn on the 1st January of this year, 24 were drawn by Sub-Assistant Superintendents, 1st grade, including some who were Honorary Assistant Superintendents. The proposal would therefore also have the effect of benefiting the junior men at the expense of their seniors.

(viii) These objections (excluding the second which is common to both schemes and must occur in respect of any scheme as the Sub-Divisional charges will be abolished) appear to us on the whole to outweigh those which apply to the proposal which we recommend. The alternative scheme has, however, the advantage that it continues to the staff of the Department permanently, though in a new form, emoluments which under the Circle Scheme would otherwise be lost to it.

Proposals for
bringing the
Circle Scheme
into operation.

12. (i) The manner in which the Circle Scheme should be brought into operation and the arrangements under which the existing staff can be utilised in giving effect to it can best be considered together. The first step would be to appoint the Directors of Circles, with the enhanced rates of pay elsewhere proposed for the administrative staff.* On appointment each Circle Director would enter on his duties at his head-quarters, which would be those of the Local Government or Administration, Lahore and not Peshawar being selected as the proper place in the case of the Punjab Circle. Each Circle Director would then frame for the approval of higher authority a scheme laying down accurately the boundaries of the Divisions of which his Circle would be composed and fixing definitely the head-quarters of each Division. Where the present Divisions overlap the boundaries of more than one Circle, the new limits would be proposed after consultation between the Circle Officers concerned. In fixing the Divisional head-quarters the question of office and other accommodation for the Superintendent, Assistant Superintendents and Sub-Assistant Superintendents would have to be very carefully considered and proposals made with due regard to economy. Against the extra expenditure, which is inevitable but need not be great, the Director would set off the sale-proceeds or rent of Divisional or Sub-Divisional offices no longer required. After sanction of the Director's scheme, when the needful accommodation had been provided at Divisional head-quarters, and as each Division in this way became ready for the change, the Sub-Divisions composing it would be abolished and the Sub-Divisional Officers would be so posted that the Divisional Superintendent would obtain his allotted staff. By this method of introducing the Circle Scheme every Circle Director, after communication, so far as necessary, with any other Circle Director concerned, would be responsible for the local arrangements finally accepted for the Circle which it would be his duty to administer.

(ii) Immediately upon the appointment of the Circle Directors the proposed relief to the Direction must be afforded, otherwise the officers of the Direction who will be wanted for Circle charges could not be spared. The powers proposed for Circle Officers in this Report would at once be conferred upon them; and in the first instance the simple rule would be observed that each Divisional Superintendent or Superintendent in charge of an office would be subordinate to and report through the Circle Officer within whose Circle his head-quarter

* Vide paragraph 35 below.

were situated. Sub-Divisions, as already implied, would remain intact till the boundaries of Divisions were fixed and the preparations at Divisional headquarters completed. For a time, therefore, the three links in the official chain to which we have taken exception would be in existence, the Sub-Divisional Officer reporting to the Divisional Officer as now and the Divisional Officer to the Circle Officer. But the work of the Divisional and Sub-Divisional Officers would not be increased, while the Director-General would obtain the required relief by the interposition of the Circle Officer. This intermediate arrangement ought not to last long, as it would be the obvious duty of each Circle Director to prepare and bring into force with all reasonable expedition his scheme for his own Circle.

(iii) We have been asked to consider what intermediate arrangements upon the introduction of a general Circle Scheme would be necessary pending the final organisation of the Postal Circles. The reply is that the intermediate arrangements just proposed should suffice. We anticipate that by the time Circle Directors are at work fixing the boundaries of the Divisions which are to constitute their Circles the major Postal Circles will, in almost all cases, have been so determined that no further adjustments of boundaries will be required. Should this be so, then, as already said, the remaining adjustments would present no difficulty.

(iv) We put forward the plan described above as the best which the circumstances admit of. But with reference to the proposed immediate appointment of Directors of Circles on the introduction of the scheme we fully recognise that there may be difficulty in simultaneously relieving so many of the higher officers of the Department of their present duties; and we think that considerable latitude in this respect should be left to the Director-General of Telegraphs when bringing the scheme into operation.

13. (i) While Circle Directors must be responsible for final boundaries and the final selection of Divisional head-quarters, we think it proper to record our suggestions with regard to the future Divisional charges; and as the strength of the staff depends on the number of charges, it is, of course, essential that we should make definite proposals for the number of Divisions in each Circle. We have therefore framed the recommendations set forth in the tabular statement below which has been prepared after careful consultation with local officers during the course of our tours. From the nature of the case these recommendations are tentative; but as they have been the result of much thought and care, we think that they should be adopted by each Circle Director unless he can show strong reasons for some other arrangement. One or two points must necessarily be left more open than these remarks imply, as will be explained presently. Subject to what is said above, our recommendations stand thus:—

Proposals in regard to Divisional charges.

Name of Circle.	Number of Divisions and Offices in charge of Superintendents.	Names of Divisions and of their head-quarters, and Offices in charge of Superintendents.
Bengal	5	Bankipur, Kharagpur, Calcutta, Darjeeling, and the Calcutta Office.
Bombay	5	Ahmedabad, Belgaum, Bombay, Karachi, and the Bombay Office.

Name of Circle.	Number of Divisions and Offices in charge of Superintendents.	Names of Divisions and of their head-quarters, and Offices in charge of Superintendents.
Burma	5	Akyab, Kindat, Maymyo, Moulmein, and Bangoon.
Central Provinces	3	Ajmer, Jubbulpur, Nagpur.
Eastern Bengal and Assam	4	Chittagong, Dacca, Dibrugarh, Shillong.
Madras	6	Bangalore, Calicut or Mangalore, Madras, Trichinopoly, Vizagapatam, and the Madras Office.
Punjab	5	Lahore, Quetta, Peshawar or Rawalpindi, Srinagar, Umballa or Delhi.
United Provinces	5	Agra, Allahabad, Lucknow, Meerut, and the Agra Office.
TOTAL	38	

(ii) It is intended that the head-quarters of the Division shall be at the place from which the Division takes its name : but the choice as between the head-quarters mentioned above in the alternative should be made after considering the following points :—

- (1) *Calicut or Mangalore.*—Mangalore is at present the head-quarters of a Sub-Division in the Bellary Division. It is a question for local inquiry whether this place or Calicut is the more suitable and important centre for the Division which is to be formed on the South West Coast.
- (2) *Peshawar or Rawalpindi.*—The new Division is to be formed in the North-West Frontier Province. Civil and military considerations have to be taken into view. Rawalpindi is now the head-quarters of a Sub-Division. We have been informed that the present Superintendent finds that the greater part of his work is in Peshawar or on the Frontier. In both places house accommodation is deficient.
- (3) *Umballa or Delhi.*—Umballa is the existing head-quarters of the Delhi Division. It is a healthier place than Delhi (the head-quarters of a Sub-Division) but commercially of little importance. At Delhi there is now a Chamber of Commerce and it is a most important junction of railway lines.

(iii) There would, under the scheme, be no Divisional head-quarters at Cawnpore; and if Umballa is selected in preference to Delhi, there would be no officer permanently located there to represent the Department. It was strongly urged* at Cawnpore that the Department should be represented on the spot by an officer not below the rank of Assistant Superintendent. If in any large commercial centre, such as Delhi or Cawnpore, or, as may possibly be the case in Upper Burma or Seistan, in some outlying tract with which communications are difficult, there appears to be a real necessity for posting an Assistant Superintendent or Sub-Assistant Superintendent permanently to such centre or locality, this can be done without infringing the principles of our scheme. The assistant at the outpost would not correspond officially with the

* See Part XI of the Proceedings, pages 107, 108.

Divisional Superintendent, but would obtain his orders unofficially or by personal communication when that could be arranged. Here again we have followed the principles of the civil administration, Assistant Collectors, Assistant Commissioners or Extra Assistant Commissioners being sometimes permanently stationed at outposts when sufficient reasons exist. But in framing our recommendations for Divisional charges and head-quarters we have carefully studied the means of preventing any need for outposts; and this we have endeavoured to obviate either by converting Sub-Divisions into Divisions, as in the cases of Darjeeling and Srinagar, or by proposing to fix the Divisional head-quarters at such places that no outposts will be required. We think, therefore, that though the possibility of stationing officers in permanent charge of outposts should be recognised, such permanent charges should be very rarely sanctioned and then only on particularly strong grounds. The temporary arrangements for postings by which the difficulty here under consideration can be partly met have already been described in paragraph 10. (ix) above.

Proposals for
the distribution
of officers.

14. (i) We now have to consider the distribution of officers which will be required to man the proposed charges. We have already noted that it will be necessary to promote one Superintendent to the rank of Director to complete the staff for eight Circles, but this will not involve any addition to the total strength of 101 Superior Officers. In other respects also we find that the sanctioned scale of officers in the Department, when allowance is made for a reduction of two in the number of Superintendents caused by the abolition of the appointments of the Superintendent of the Check Office and the Superintendent of Stores, is sufficient not only to carry the proposed scheme into effect, but also to provide six officers for the Technical Branch, the creation of which we recommend.* To man the proposed extra Divisions, it will be necessary to place Assistant Superintendents in charge of many of them. In suggesting this arrangement we have been influenced by the fact that while in the Telegraph Department officers in the Rs. 700 grade are classed as Assistant Superintendents, officers on the same pay in the Public Works Department are employed as Executive Engineers. The statements which will be found in Appendix C show the present distribution based on the sanctioned ultimate strength of officers and the distribution which we propose; also the number of assistants which, in our opinion, will be required in each of the proposed Divisions.

(ii) Statement A showing the distribution of Gazetted Officers and Sub-Assistant Superintendents (General) requires a little explanation which may be given here.† The total present strength of these officers is 173, *viz.*, Superior Staff 101 and Upper Subordinates 72, while in the columns showing the proposed strength only 93 Superior Officers and 68 Upper Subordinates are shown, making a total of 161. The difference of 12 is accounted for as follows:—

- (1) the appointments of Superintendent of the Check Office and Superintendent of Stores are abolished;
- (2) one appointment for a Superintendent and five for Assistant Superintendents are absorbed in the Technical Branch;
- (3) four appointments for Upper Subordinates are absorbed in the Store Branch.

(iii) It has been mentioned above that in framing our scheme we allot Divisions permanently to Assistant Superintendents. We have been obliged to

* See paragraph 25 below.

† See also paragraph 31 below.

put our proposals in this way in order to save Assistant Superintendents, 1st grade, from the loss of pay which they would sustain were the appointments in that grade converted into Superintendships without alteration of pay, for in that case the officers on Rs. 700 would no longer be entitled to charge allowances or to officiating or temporary promotion to Superintendent, 2nd grade. We admit that our proposal to put Assistant Superintendents, 1st grade, in permanent charge of Divisions and to permit them to draw the emoluments of officiating or temporary promotion must be regarded as a temporary expedient, until the revision of the rates of pay and method of payment amongst Executive and Assistant Engineers of the Public Works Department has been carried out, and the benefits of a like revision extended, in some shape or another, to the Telegraph Department. When this is done it will probably be quite practicable to treat the Assistant Superintendents, 1st grade, in permanent charge of Divisions as Superintendents, which is what they will really become.

(iv) It will be noticed from Statement A that we have provided a reserve of 22 Assistant Superintendents for leave vacancies, special construction work and similar requirements. No provision is necessary for leave vacancies amongst Sub-Assistants as these appointments can always be filled up by officiating promotions from the Signalling Establishment. In the same Statement eight Sub-Assistants of the General List are shown as Personal Assistants to Circle Officers. It is important that Divisional Superintendents should not refer to Circle Officers matters which are within their own competence and that the time of the latter should not be occupied with comparatively unimportant business which can be suitably disposed of by officers of lower rank. Fully admitting these principles, we nevertheless are of opinion that Personal Assistants should be provided for Circle Officers, as for Postmasters-General at present, more particularly because Circle Officers will often be absent from their head-quarters on tour. The object of these appointments is not to relieve Circle Officers of any of their own work, but to enable them to perform it more effectively. As to the class from which the Personal Assistants should be provided, we think that in the first instance they should certainly be Sub-Assistants. Whether at a later stage they should still be men of the same class experience alone can decide.

Clerical Establishments of Circle and Divisional offices.

15. (i) We have already made proposals for the revision of the office establishment of the Direction: but in connection with the Circle Scheme it is also necessary to readjust the clerical establishments of Divisions and to provide such establishments for Directors of Circles. We consider that each Circle Officer will require a staff of seven clerks, with the exception of the Central Provinces Circle where five should prove sufficient. In Appendix D to this Report we give a statement showing the clerical establishment which appears to us to be necessary for each Division, working up to a total of 158 clerks; these men, and the clerks required in Circle Offices, should be found gradually from the existing staff as Sub-Divisions are abolished and the Circle Scheme introduced. Excluding the posts of Head Clerk to the Circle Officers, we propose that there shall be one list for each Circle to include the clerks employed both in Divisions and in the Circle office. Promotions should run throughout the Circle from grade to grade by seniority and on approved service, the list being maintained by the Circle Officer and the promotions made by him. This system is the only one which will minimise transfers and secure an equable flow of promotion amongst the whole body of clerks in the Circle. The

appointments in the higher grades should, however, be reserved for the Head Clerks in Divisional offices, and the Circle Officer should make the selections for these appointments from amongst the clerks in the Circle best fitted for them. Divisional Superintendents should be allowed to appoint to the lowest grade on the occurrence of vacancies.

(ii) The rates of pay and the numbers in the grades which we recommend are given in Appendix D; they have been based on a consideration of local conditions so no local allowances have been proposed nor should any be required. If any subsequent modification in the rates or in the sanctioned strength is found necessary, the Director-General, if it be within his powers, should make the needful changes, providing the requisite funds from his grant for fixed establishment.

(iii) In considering the cost of these arrangements it is necessary to take into view the reduction effected in the Direction office. It appears from a statement supplied by the Director-General of Telegraphs that in Divisional and Sub-Divisional offices there are at present 173 permanent and 48 temporary clerks on an aggregate pay of Rs. 10,650 a month. Under our proposals there will be in Circle offices and the offices of Divisional Superintendents 212 clerks costing Rs. 15,183 per mensem entailing a reduction in numbers of nine clerks and an increase in cost of Rs. 4,533 per mensem. This increase is due to the formation of grades on such conditions and such pay as will give these clerks reasonable prospects of promotion, their chief grievance being thus removed. As a set-off, there is a saving of Rs. 1,412 per mensem in the establishment of the Direction—a saving which would have been greater had not the pay and prospects of 24 clerks to be retained in this office likewise been improved.

Financial
control over
the Depart-
ment.

16. (i) To complete the Circle Scheme above set forth it is necessary to define the powers to be exercised by the Director-General of Telegraphs and the Circle and Divisional Officers respectively. Before determining whether any further authority can be delegated to the Director-General, we have found it necessary to consider the subject from the opposite point of view and to form an opinion upon the extent of the financial control which Government should exercise over the Department. We think that such control should be general and exercised mainly by a review of transactions and a retention of the powers to sanction expenditure; it is essential therefore that the means of exercising these powers should be adequate and complete. We are, however, of opinion that the rules governing the appropriation of funds to the Department do not reserve to Government adequate power to regulate expenditure; and this defect appears to us to be mainly due to the fact that there is only one finance head to which all expenditure of the Department, both Capital and Revenue, is debited. With a better system of financial control it would be possible to enlarge the Director-General's powers in many directions.

(ii) A distinction between Capital and Revenue expenditure is, indeed, maintained both in the accounts and in the final allotment of funds to departmental requirements; but we understand that in the past sufficient attention has not always been paid to the necessity for keeping a strict Capital account which does not omit any past Capital expenditure. We are informed also that the yearly grant is fixed in a lump sum, and that the Director-General is left to divide subsequently the total amount between Capital and Revenue and to subdivide the revenue portion over revenue heads. Under this procedure the control of Government is in effect confined to a consideration of the total expenditure, and owing to this circumstance Capital outlay, upon which

the extension of the operations of the Department really depends, might be too much restricted, the grant for working expenses being unduly large. As a fact the needs under Capital and Revenue are quite distinct and should be considered separately; and, if the control of Government is to be adequately maintained simultaneously with a suitable delegation of authority to the Director-General, it is essential that a clear distinction should be made from the beginning between Capital and Revenue demands, and that the grants for each should be allotted separately by Government. This distinction will be all the more necessary in future as, with the steady increase in traffic, there will be a growing demand on the Revenue expenditure, while at the same time there will be greater Capital expenditure in order to provide that extension of telegraph facilities for which the public are likely to press.

(iii) To enable Government to exercise the financial control which is essential, we recommend that (1) the head of account "16 Telegraphs" should be sub-divided into 16 A Telegraphs, Capital expenditure, and 16 B Telegraphs, Revenue expenditure; (2) the Director-General when applying each year for the grants of the following year, should submit separate schedules of his requirements under Capital and Revenue; and (3) the exact grant under each such main head should be intimated to him, the grants being kept quite apart from the beginning. The demand under 16 A Capital will vary with the new Capital works ordered from time to time by Government, a sum being added to meet the smaller extensions within the Director-General's power of sanction. The demand under 16 B Revenue should show separately the requirements under—

I.—*Maintenance of lines, apparatus and plant; including repairs to buildings executed by the Telegraph Department.*

II.—*Fixed establishments and rent.*

III.—*Office contingencies and travelling allowances.*

IV.—*Special rewards.*

V.—*Temporary establishment.*

VI.—*Pic-money and overtime allowances.*

VII.—*Working charges of combined offices.*

And when the Revenue grant is fixed its division over the above heads should be intimated at the same time.

(iv) The grant for *maintenance of lines* is intended to cover the cost of items of expenditure such as labour, freight, carriage charges, etc., and the value of stores, but not of any establishment except such as is chargeable under the rules to "works" and is actually employed on maintenance. The travelling expenses of such establishment would also be included under this head. The grant will vary with the mileage to be maintained.

(v) The grant for *fixed establishments and rent* should cover the cost of all fixed establishments of the Department, however they may be employed. It will be necessary, in calculating the grant under this head that will be immediately required, to take into account the cost of all existing establishments and to make allowance for the increments which the staff will earn and the temporary establishment that will be made permanent. As the Department is expanding rapidly, the total grant for fixed establishment will require to be increased each year, to meet the cost of the additional appointments that will have to be created, as well as to introduce gradually the improvements in the pay of the subordinate staff recommended in this Report and such other

improvements as may be necessary. We understand that in the Post Office an arrangement is in force under which the Director-General of the Post Office is authorised to incur annually, and without the previous sanction of Government, extra expenditure on fixed establishment up to a certain specified sum,* and that this system has worked well in practice, proved economical and obviated the necessity of numerous references to Government. We consider that the same system might with advantage be extended to the Telegraph Department, and we recommend that the Director-General of Telegraphs should be authorised to incur each year extra expenditure on fixed establishments, subject to a maximum of Rs. 1,80,000 a year, and to the condition that the total sanctions given in any one year shall not increase the expenditure on account of sanctioned fixed establishment to be included in the Budget Estimate of the following year by a larger sum than Rs. 30,000 a month or Rs. 3,60,000 a year. This sanction is intended to cover all new or additional appointments that may be made including those of signallers, and the revisions of existing scales recommended in this Report, except that of the signalling establishment. In the case of new appointments on incremental rates of pay the charge against the grant should be the average pay of the appointment. The maximum figure of Rs. 1,80,000 should be reconsidered after two years, but as a beginning it appears to be fair; it is half the amount granted to the Post Office and we think it suitable considering the relative establishment expenditure of the two Departments, the rate of expansion of the Telegraph Department, and the revisions of clerical and line establishments that will be required.

(vi) With the recommendations which we are making elsewhere † in the matter of transfers, the expenditure under the head *office contingencies and travelling allowances*, will probably be smaller than heretofore.

(vii) The amount under the head of *special rewards* will be inconsiderable and need not vary.

(viii) The expenditure on account of *temporary establishment* is very heavy in the Telegraph Department. In paragraph 18 we suggest the adoption of a rule that establishment sanctioned as temporary must not continue as such for more than two years. If this proposal is accepted, the grant may be reduced by the cost of the temporary establishment made permanent.

(ix) The grant under the head of *pie-money and overtime allowances* should be fixed each year and kept as low as possible.

17. In paragraph 102 of this Report we explain that a certain amount should be set aside each year for *the working charges of combined offices* and placed at the disposal of the Director-General of the Post Office, who should be required to forecast his expenditure on this account in the same way as he estimates other postal expenditure. In the same passage we recommend that the amount of this grant should be fixed on a consideration of this forecast, subject to a maximum of 35 per cent. of the gross receipts from combined offices, and that the percentage should be subject to revision. These proposals have no direct connection with the Circle Scheme, but are mentioned here because it is convenient to review in one place all of our financial proposals before we proceed to deal with the powers of officers.

Working
charges of
Combined
Offices.

* Government of India, Department of Commerce and Industry, letter No. 1791-72, dated 1st March 1906, to the Director-General of the Post Office.

† *Vide* paragraph 91 below.

Powers of the
Director-
General of
Telegraphs.

18. (i) Coming now to the powers of the Director-General of Telegraphs, and taking first the case of re-appropriations we consider that once the grants have been fixed the Director-General should have full power to make all re-appropriations except in the following cases:—

- (a) From the English to the Indian grants.
- (b) From Capital to Revenue or *vice versa*, except between the portions of the grant for fixed establishment allocated to Capital and Revenue. The whole of the charges on fixed establishment should be shown under Revenue with a deduction entry of the portion debitable to Capital as its share on account of Capital expenditure. As this share will vary with the actual Capital expenditure, the Director-General of Telegraphs should be authorised to correct the division so long as the total grant for fixed establishment is not exceeded.
- (c) From the grant for any Capital work sanctioned by the Government of India.
- (d) Any re-appropriations which will increase the grants for fixed or temporary establishment, or the grant for special rewards.
- (e) Any re-appropriation from or to the grant for working charges of combined offices.

(ii) We have examined the present powers of the Director-General to sanction expenditure on works or on establishment and to deal with various matters of administration with a view to seeing whether any additions or modifications are called for; and we have given in Appendix E a schedule of the existing powers, stating against each item what change, if any, we propose.

(iii) We recommend a considerable change under the head of *New Capital Works*. At present the Director-General may sanction such works when estimated to cost not more than Rs. 20,000. This limit has been in force for many years and with the present prices of materials and labour is only sufficient to enable the Director-General to sanction small extensions of about 30 miles, an extension usually consisting of a line of posts with two wires. We consider that this limit is too low and that it must result in far too many references to Government. We recommend therefore that it be raised to Rs. 50,000, an amount which will enable the Director-General to sanction extensions of about 70 miles in length. We notice that Rs. 50,000 is the limit specified in the case of the Director-General, Military Works, and with the proposals which we have made for closer financial control a similar limit may safely be fixed for the Director-General of Telegraphs. The changes in items 2 and 3 of the schedule follow the change here proposed.

(iv) The present powers of the Director-General to sanction establishment are summarised in letter No. 10164, dated 22nd December 1906, from the Government of India, Department of Commerce and Industry, to the Director-General. These powers are the results of various orders passed from time to time and are not uniform in their application to all classes of establishments, with the result that the powers of the Director-General in respect of the different classes are unequal and unsatisfactory. We consider that the necessary control of Government could be retained and sufficient freedom of action given to the Director-General of Telegraphs if the present powers were simplified and

made more uniform, and in substitution for those at present existing we suggest the following:—

Permanent Establishment.

The Director-General of Telegraphs should have full powers to sanction all classes of establishment, with the following exceptions:—

- I. He may not create or abolish any appointment on a salary exceeding Rs. 250 a month or modify the salary of such an appointment or raise the salary of any appointment above this amount;
- II. He may not modify the rates of pay of any graded service when these have been fixed by the Government of India;
- III. He may not change the proportions in the different grades of such a service except where the proportions have not been fixed by Government, and provided that no addition is made to the number in a grade or grades on pay exceeding Rs. 250 a month;
- IV. He may not create a new grade of officers on a salary exceeding Rs. 100 a month;

In the case of the Signalling Establishment the powers of the Director-General are subject to the further restrictions enumerated in paragraphs 84 and 85.

Temporary Establishment.

He should have full powers with the following restrictions:—

- I. He may not create any appointment on a salary exceeding Rs. 250 a month, or raise the salary of an existing appointment above this amount;
- II. He may not sanction establishment temporarily to avoid increasing the charges for fixed establishment, but must appoint establishment permanently and not temporarily where it is clear from the first that it will be required permanently; and
- III. He may not continue establishment sanctioned temporarily as such for more than two years, by the end of which time it must either be abolished or made permanent.

(v) Other smaller points where we have proposed changes are—

Item No. 8 of Schedule.—We consider that the Director-General should have full powers in the case of all temporary buildings, and in the case of permanent buildings full powers to the limit up to which he may sanction the construction of such buildings from his grant.

Item No. 12.—It has frequently been represented to us that much inconvenience and unnecessary correspondence are caused by the restrictions regarding the purchase of small quantities of stationery locally. We consider that some relaxation of this restriction is necessary and have provided for it.

Item No. 14.—We have included directories and other similar publications under this power.

Item No. 18.—We hold that the Director-General of Telegraphs should not have the power to post or transfer Directors.

Item No. 19.—We recommend that the Director-General of Telegraphs should have power to suspend any officer below the rank of Director.

Items Nos. 46 and 47.—We have followed here what we understand to be the arrangement in force in the Post Office.

Item No. 50.—This is a new power which in our opinion may properly be granted to the Director-General of Telegraphs.

Item No. 65.—We propose that the Director-General of Telegraphs should not be empowered to grant leave to Directors or Officers of equivalent rank.

Items Nos. 75 and 76.—We have differentiated here between losses of stores and losses of cash. We consider that the limit in the first case might be raised to Rs. 5,000.

Powers of
Directors of
Circles and
Superintend-
ents in
charge of
Divisions.

19. Having disposed of the powers of the Director-General we have next to consider what powers should be delegated to the Circle Directors. In making our proposals we have kept in mind the principles that (1) the Directors should be given as much authority as is compatible with the control of the Director-General over the Department, and (2) the Direction should be freed from the necessity of dealing with the multitude of petty details that are now referred to head-quarters. We have revised the powers of Superintendents on like principles so as to ensure that the time of Directors shall not be wasted by trivial matters. We have scheduled the powers proposed for each of these classes of officers in Appendix F and have retained in the majority of cases the powers proposed by the Departmental Committee of 1904. We have not thought it necessary to define the powers of the Directors of Traffic and Construction. The Director-General will settle, as a matter of office procedure, the extent to which these officers should dispose of cases without reference to him. It must be understood throughout that they do not exercise independent functions, but act merely on behalf of the Director-General.

Distribution
work of Super-
ior Staff.

20. (i) Having now completed our description of the Circle Scheme we come to the third question referred to us which is expressed in these terms:—

(3) Whether the existing organisation of the Superior Staff of the Department and the distribution of work is satisfactory, and if not what alterations should be made; and in particular whether a clearer distinction should be made between (a) administration, traffic and inspection on the one hand, and (b) construction and engineering on the other.

(ii) Taking first the latter part of the question, we hold, after much careful consideration, that some specialisation of duties is necessary now, and that further specialisation will be required as time goes on. We do not, however, advocate, on the Railway model, a separate branch of Telegraph Engineers, all general administrative matters being left to the Traffic Officers. Such a complete cleavage of the staff of the Department would lead, at any rate under present conditions of telegraph business, to waste of time in travelling and duplication of work, because two sets of officers would have to travel over the country to perform inspections of different kinds which, so far, it is practicable to entrust to a single agency. There would obviously be additional expenditure on staff, which can, at present, be avoided. A more serious objection is that it is essential to the success of the Circle Scheme that the Divisional Superintendents and Circle Officers should be thoroughly acquainted with all branches of the work of the Department, except indeed that known in a special sense as "Technical" for which we propose special provision. This involves not a separation throughout the service between Traffic experts and Telegraph Engineers, but the training of Assistant Superintendents in both of these branches of duty. We shall revert

to the subject of the training of Assistant Superintendents in another part of this Report.*

Traffic Branch.

21. Holding these views we nevertheless consider that specialisation, though not exactly on the lines contemplated, should begin in Traffic after some years, and in Electrical Engineering or Technical work with as little delay as possible. The time, we think, will come, though it has not come yet, to form a separate Traffic Branch composed of the officers in charge of or posted to large offices. The officers, who hold charge of the three Presidency offices and Agra, at present number only four; and that number is obviously too small for the constitution of a separate Branch. The time for the formation of such a Branch will, we think, have arrived when there are twelve offices with such a volume of traffic that each will demand the services of an officer of superior rank for its proper control. By that time some of the offices will require, in addition to the Superintendent in charge, the services of an Assistant Superintendent, so that the total number of officers in the Branch will exceed twelve. If traffic continues to increase at the rapid rate, which may reasonably be anticipated, this state of affairs will, we believe, be reached, certainly in ten years and possibly sooner. In order that the Department may be prepared to meet this condition of things when it arises, a beginning should now be made in this direction by selecting a proportion of the officers recruited at home with a view to their employment when they have entered the service in the Traffic Branch, the constitution of which has been proposed; and with this object some of the recruits might be required, before coming to India, to go through a practical course of instruction in traffic, for which arrangements might be made with the British Post Office. There is no reason, however, why the Traffic Branch should not also be recruited partly in this country; and we recommend that, when the Branch is constituted, one-third of the appointments in it should be reserved for Traffic subordinates, provided that officers possessing the necessary qualifications are available. Officers so selected should be promoted to the Superior Staff as members of the Provincial Service. The adoption of this measure would not only be advantageous from the point of view of economy, but would also produce a most beneficial effect on the work of Traffic subordinates generally.

Organisation of a Technical Branch. Present arrangements.

22. As regards specialisation in Electrical Engineering or Technical work one of the most important proposals that we have to make is that a special Technical Branch of the Department should be organised. The materials for such a Branch are now available in the Department and indeed, in a certain sense, the Branch may be said already to exist. It has for some time been recognised † that the Department requires officers with special qualifications as Electrical Engineers, and in 1893 five such officers and between September 1900 and October 1903 nine such officers were recruited in the open market. At present, out of the Superior Staff the Electrician and five Assistant Superintendents are engaged upon technical work; while not less than sixty-one Telegraph Masters and signallers are employed, wholly or partly, on duties of a technical nature; but the subordinate members of this staff, if such it can be called, are not adequately trained, nor is there any organisation of its form or functions.

Certificates for technical duties.

23. By a measure quite recently adopted it has been practically admitted that, in consequence of the very frequent introduction at the present day of

* See paragraph 157 below.

† Vide Part I of the Proceedings of the Committee, page 82.

improvements in electrical appliances, the Department requires a new class of subordinates who must be competent electrical mechanics possessing higher technical qualifications than those of the ordinary Testing Telegraph Masters. After considerable correspondence* the Government of India in March 1906 sanctioned the grant of special allowances of Rs. 50 and Rs. 25 a month respectively to Telegraph Masters or signallers who, after a course of training in the office of the Electrician, obtain a first or second class certificate and are selected to fill one of eight first class or thirteen second class appointments, of which nineteen are allotted to important Signal Offices, the remaining two appointments being held by travelling Telegraph Masters employed respectively on the Wheatstone Automatic system and on the inspection of accumulators and dynamos. These special allowances and the ordinary charge allowances of Telegraph Masters are not cumulative, and the former are at present tenable only by certificate holders actually filling the twenty-one sanctioned appointments, though the Director-General has proposed that the allowances shall be tenable by the certificate holders howsoever and wheresoever employed. Orders on this proposal have, we understand, been reserved until we have reported on the subject. These arrangements are admitted to be of a makeshift character, and our recommendations proceed on wider lines better suited, as we believe, to the permanent needs of the Department.

Origin of and
Reasons for the
Proposal.

24. The proposal to organise a Technical Branch was made by Sir Sydney Hutchinson in his discussions with the Committee at Simla last October.† It has met with the support of almost every one of the officers of the Telegraph Department whom we have consulted on the subject; and the reasons in its favour appear to the Committee to be strong and convincing. The enormous increase of traffic must be met in part by the use of modern instruments of intricate mechanism, such as the Wheatstone (each costing £130), the Baudot (cost £180) and the Murray apparatus (cost £840). The working of these instruments needs more than ordinary electrical knowledge, and great loss and dislocation of traffic are the consequence if their mechanical efficiency is not effectively maintained. The rapid advance of electrical science also imposes upon the Department the obligation of keeping its electrical knowledge up to date, and for this purpose a body of specialists is required. The responsibilities of the Technical Branch would include the supervision of engine rooms and big battery rooms, of telephones, of switches—both test and telephone—of accumulator installations, of Wheatstone, Baudot and Murray machines (a technical officer being in charge wherever these machines are used), of translation instruments, of electrical fans and lights on departmental premises, and of installations of wireless telegraphy of which there are now seven in India and the Andamans.

Organisation of
Technical
Branch.

25. We recommend that the proposed Technical Branch be organised in the following manner. The superior establishment required for the special Technical Branch for some years to come will be—

One Electrical Engineer-in-Chief,
Five Electrical Engineers.

We shall show elsewhere in this Report ‡ that this number of officers can be provided without increase to the sanctioned total of 101 officers in the

* Government of India, Department of Commerce and Industry, No. 1970-1971, dated the 12th March 1906.

† *Vide* Part I of Proceedings of the Committee, page 12, paragraph 3, and page 22, paragraph 7.

‡ *Vide* paragraph 31 below.

Superior Staff, and we are satisfied that six officers fully qualified to hold the appointments can be provided from those already in the Department. It will not therefore be necessary to resort to special recruitment at present for the purpose of filling up these posts, but in the future, as occasion may arise, steps should be taken to select a proportion of officers with special reference to their fitness for employment in the Branch. Officers appointed to the Technical Branch at the time of recruitment should remain in it for the whole of their service, and should have no title to employment in the ordinary line. But the officers who are already in the Department and employed on technical work, must be given the option of entering the new Branch or of returning to Divisional work. In the case of those electing the former alternative, the choice should be final; but officers who prefer the General Branch may continue to be employed on technical work until the occurrence of vacancies in the Superior Staff gives the opportunity of recruiting other officers to take their places in the Technical Branch; and when this can be arranged they should finally leave it.

The Electrical Engineer-in-Chief and the Electrical Engineers.

26. We recommend that the head of the Technical Branch should be styled the Electrical Engineer-in-Chief in order that he may have the necessary status as compared with officers of similar rank in other countries. The other officers of the Branch will probably be employed on work of much the same class whatever their period of service, and in their case no distinction corresponding to that between officers in Divisional charge and those of lower rank will exist. For this reason we have proposed that all should bear the same title, Electrical Engineer, and for the same reason we consider it inadvisable that they should be graded with their contemporaries in the general line, or that their promotion should depend on the occurrence of vacancies in the ordinary grades. A system of incremental pay appears to us to be the most suitable for a Branch of this kind and we recommend the scale set forth in Appendix G to this Report. Electrical Engineers on joining the Department should remain on probation for a period of two years until their fitness for the work has been tested; and during this period they should draw pay at the rate of Rs. 350 per mensem. If they are confirmed, their pay should increase by annual increments of Rs. 50 until it reaches a maximum of Rs. 1,250 after twenty years' service. The only promotion which will be open to a Technical officer beyond this point will be to the post of Electrical Engineer-in-Chief. For this appointment we recommend that the pay should be Rs. 1,500 rising by annual increments of Rs. 50 to Rs. 1,750 and thereafter by annual increments of Rs. 100 to Rs. 2,250. The minimum and maximum pay are the same as those we shall propose for Directors, and we consider that the holder of the appointment should rank with them according to the date of appointment as Director and Electrical Engineer-in-Chief as the case may be.

Duties and postings of Electrical Engineers.

27. Of the officers, other than the Electrician, at present engaged in technical work three are employed on Wireless Telegraphy, one on Baudot and Murray, and one on the class of instruction, installations and general duties. The Electrician proposes that on the formation of the Branch two officers should ordinarily be employed on Wireless Telegraphy, two for all Mechanical Telegraphs and as Inspectors of Installations, and one for the class of instruction, new installations and general technical work. The proposed arrangement of duties appears to us to be suitable, but it will of course be necessary to re-allot them from time to time as circumstances may require. This is a matter which

may be left to the Director-General of Telegraphs, who should also regulate the leave, promotion and transfers of the officers of the Branch other than the Electrical Engineer-in-Chief.

Organisation of
the Subordi-
nates of the
Technical
Branch.

28. The subordinate portion of the Technical Branch should for the present consist of three Sub-Assistants and thirty-eight Telegraph Masters and signallers. As already mentioned, we have ascertained that sixty-one men are now employed wholly or partly on technical work, and the Electrician has estimated that the amount of technical work performed by them is equivalent to the whole-time service of more than thirty-eight men. In these circumstances we are satisfied that thirty-eight men can be spared from traffic for technical duty without any addition to the establishment. The proposed distribution of these men is shown in the table given below.* The scheme, however, involves the creation of three new appointments of Sub-Assistant Superintendent (Technical) on Rs. 350 a month and no corresponding reduction can be made in the number of either the Traffic or the General Sub-Assistants. We are satisfied that three officers of the rank of Sub-Assistant are required to assist the Superior Officers, and that they cannot without sacrifice of efficiency be dispensed with. One will be employed in the Electrician's office and two, who will be touring officers, as Inspectors of Mechanical Telegraphs and of Installations and Telephones. These appointments are also necessary in order to give technical subordinates the same chances of promotion as those who remain in the ordinary line. It is not desirable that when their turn for promotion comes they should be promoted to Traffic Sub-Assistant, because their training will not have fitted them for Traffic appointments, and their special knowledge and experience would be lost to the Department when they had become most valuable. The Technical Branch should consist of picked men and service in it should be made as attractive as possible, and it is therefore necessary that it should include appointments

	TELEGRAPH MASTERS AND SIGNALLERS.*		
	General.	Mechanical.	Total.
Agra Office	1	1	2
Bombay Office	1	1	2
Calcutta „	1	1	2
Madras „	1	1	2
Rangoon	1	1	2
Circles	8	4	12
Wireless	7	...	7
Murray . . . . .	...	2	2
Simla and Calcutta (season) . . . . .	...	1	1
Special duty	2	2	4
Electrician's Office	2	...	2
TOTAL	24	14	38

for Sub-Assistant Superintendents. The leave, promotions and transfers of the Sub-Assistants should be regulated by the Director-General, and those of all other members of the subordinate section of the Technical Branch by the Electrical Engineer-in-Chief on the reports of Divisional Superintendents and Circle Officers.

Pay and allowances of Subordinates of the Technical Branch.

29. (i) We do not consider it advisable that at present separate rates of pay should be framed for the subordinates in the Technical Branch. It will probably be more convenient that for some time to come they should be seconded from the signalling establishment, and should draw the pay to which they are entitled as signallers or Telegraph Masters *plus* a special technical allowance. As a condition of employment in the Branch they should be required to undergo a course of training in the Electrician's office and to receive a certificate of fitness from him. Only one class of certificate should, we consider, be given, as it is inadvisable and inconvenient to make a distinction between the certificate holders by granting two classes of certificates. The examination will show whether the candidate is qualified or not; and if any further distinction were made, it would be necessary to grant two different rates of allowance which would needlessly complicate the scheme. It is recommended that all subordinates, whether Sub-Assistants, Telegraph Masters or signallers, who obtain certificates should, while employed in the Branch, draw an allowance of Rs. 25 per mensem in addition to the pay of their rank. In the case of Telegraph Masters of the second and third grades the allowance should be cumulative and should be drawn in addition to the Telegraph Master's allowance. The holding of a technical allowance should also qualify for promotion to the first class of signallers described in another portion of this Report.* Subordinates in the Technical Branch should be liable to reversion to traffic work at any time, if this proves necessary, but should ordinarily remain in the Technical Branch for the whole of their service if found to be efficient. On reversion to traffic duties the technical allowance will cease. For promotion to Telegraph Master a signaller in the Technical Branch will be required to pass the qualifying examination, and if he does so, should be promoted as soon as an officer junior to him is promoted in the Traffic Branch. Promotion from grade to grade of Telegraph Masters should be given in the same way. Promotion to Sub-Assistant Superintendent should be made strictly by selection as in the case of the Traffic and General Branches. These arrangements will supersede those described in paragraph 23 and the allowances of Rs. 50 and Rs. 25 at present granted will be absorbed. Any signaller at present in receipt of an allowance of Rs. 50 should, however, continue to draw it, until he is promoted permanently to the rank of Telegraph Master.

(ii) We have not proposed to include in the Technical Branch the Testing Telegraph Masters (or signallers employed on testing work for whom a monthly allowance of Rs. 10 has been proposed in another part of this Report). The qualifications required for the performance of the ordinary testing work are not such as to justify the grant of the technical allowance of Rs. 25 per month, and it is, we think, administratively more convenient that the Testing Telegraph Masters should remain in the Traffic Branch.

(iii) Appendix G includes a proposition statement which shows the extra cost involved in the creation of the Technical Branch.

* *Vide* paragraph 57 below.

History of the
organisation of
the Superior
staff.

30 (i) We have to turn next to the history of the organisation of the Superior Staff, and for this it is unnecessary to go further back than the year 1887. The total strength of the establishment was then fixed* at 84 made up as follows:—

				Rs.
Class	I Director-General	1		3,000
"	II Deputy Director-General	1		2,000
"	III Directors †	2	1,225-75-1,600	
"	IV Superintendent.	Grade	1 4	1,125-75-1,500
			2 10	1,000
			3 12	850
"	V Assistant Superintendents {	"	1 12	700
		"	2 13	550
"	IV Assistant Superintendents {	"	1 14	400
		"	2 15	300
TOTAL			84	

(ii) In 1893 when the working and control of the telegraphs in Kashmir were transferred to the Department, one Superintendent and one Assistant Superintendent were added to the staff, ‡ making the total 86, at which figure it remained until 1901.

(iii) In 1900 the Director-General of Telegraphs drew attention to the enormous increase of work which had taken place since the strength of the Department had last been fixed and expressed his conviction that the existing staff was inadequate. He did not ask for any increase in the number of Divisions, but was of opinion that the case would be sufficiently met if fifteen additional Assistant Superintendents were appointed, who would hold charge of important Sub-Divisions and would also be available as assistants to heavily worked superior officers. This proposal was agreed to by the Government of India § and the Secretary of State.

(iv) The matter was, however, re-opened before long. It was apprehended by the Secretary of State that the addition of the whole of the new appointments to the lower ranks of the service might result in a serious block in promotion. The method of selecting candidates from Cooper's Hill allowed the foremost men a choice between the Public Works Department and the Telegraph Department, and it was therefore undesirable that the latter Department should suffer from manifest inferiority of the prospects which it offered to the students. At the same time the Director-General had reconsidered his views that additional Divisions were not required, and the Government of India concurred with him in thinking that a redistribution and an increase in the number of Superintendents' charges was urgently called for. ||

(v) The scheme for the reorganisation of the Superior Staff, which was submitted by the Government of India and approved by the Secretary of State, provided for an immediate increase in the number of the superior appointments by seven, for the opening of five new Divisions ¶ and for the addition to the head-quarters staff of two new officers, styled Deputy Directors, while a

* *Vide* Resolution of the Government of India, Public Works Department, No. 135-T.E., dated 21st October 1887.

† The Directors received the pay of a Superintendent, 1st grade, plus Rs. 100.

‡ *Vide* Resolution of the Government of India, Public Works Department, No. 145-T.E., dated 28th December 1893.

§ *Vide* Despatch No. 24-Telegraph, dated 1st November 1900, and Resolution of the Government of India, No. 19-T.E., dated 7th January 1901.

¶ *Vide* Resolution of the Government of India, No. 923-T.E., dated 6th July 1903.

¶ In fact only four new Divisions were opened, the total number being raised from 16 to 20.

corresponding reduction was made in the number of Assistant Superintendents. It was considered that the conditions of promotion in the Public Works Department and in the Telegraph Department should be assimilated as soon as possible, in order that a fair proportion of the best students might be attracted to the Telegraph Department; it was therefore desirable on every account that the normal or eventual rate of promotion should be as nearly as possible equal to that in the Public Works Department. It was accordingly decided that an ultimate scale should be adopted for the Superintendent and Assistant Superintendent grades of the Telegraph Department, which should be identical with those of the Executive and Assistant Engineer grades of the Public Works Department. In consequence of this arrangement the number of Superintendents' charges, 1st grade, would ultimately be increased from 10 to 23. But to prevent an abnormal acceleration of promotion the introduction of the ultimate scale was made subject to a time-limit, which is reproduced below, * and the creation of additional Superintendents' charges (other than the four new Divisions which were opened at once) was deferred until officers of suitable standing were available to hold charge of them. As regards the appointments of higher rank than Superintendent, the addition of two Deputy Directors made the proportion of such appointments to the total strength 10 per cent. which was the same proportion as existed in the Public Works Department. The opportunity was taken to raise the pay of the Directors of Construction and Traffic from Rs. 1,600 to Rs. 1,800 (the pay of a Chief Engineer, 3rd grade), to fix the pay of the Deputy Directors at Rs. 1,600 (the pay of a Superintending Engineer 1st grade), and to divide the Chief Superintendents (who had previously drawn Rs. 1,125—75—1,500) into two grades on Rs. 1,400 and Rs. 1,250, corresponding to the 2nd and 3rd grades of Superintending Engineers.

(vi) The orders published in 1901 and 1903 may be summarised as follows. In 1901 no reorganisation was attempted, but an addition of fifteen appointments for Assistant Superintendents was made raising the number of these officers from 55 to 70. In 1903 the Superior Staff was reorganised with the immediate effect of transferring six appointments from the Assistant Superintendents to the Superintendents and higher officers, and the ultimate effect of so transferring the whole of the fifteen appointments created in 1901. The scale sanctioned in 1903, which is still in force, will be found in Appendix C to this Report.

	Years' service from the date of enter- ing Assistant Superintendent, 4th grade.	or	Years' service in the grade below.
* Time qualification for promotion to Assistant Superintendent, 3rd grade, after	8	or	8
Time qualification for promotion to Assistant Superintendent, 2nd grade, after	6½	or	8½
Time qualification for promotion to Assistant Superintendent, 1st grade, after	11	or	4½
Time qualification for promotion to Superintendent, 2nd grade, after	14½	or	8½
Time qualification for promotion to Superintendent, 1st grade, after	19	or	4½

Note.—If, however, an officer eligible for promotion under the time rule is not promoted for any reason such as not being recommended or being otherwise superseded, for each officer so passed over another officer may be promoted within the measure of the limiting scale.

The result of this rule will be the same as if all the officers eligible were promoted, so far as the limiting scale permits.

Under this rule any officer not qualified by length of service may be promoted in place of an officer who is eligible by the time rule, but not equally eligible with the former under the rule of selection.

Method adopted to arrive at the proper strength of the Staff.

31. We have thought it right to refer to the history of the Staff, because it is not clear that the necessity of fixing the number of Assistant Superintendents' charges with due regard to the number of officers required to fill the higher appointments after a given number of years' service received sufficient consideration. The addition of a number of appointments in the lower grades of a service without a corresponding increase in the higher grades must inevitably result in stagnation of promotion and discontent. In 1901 this principle appears to have been overlooked, and hence in 1903 it became necessary to determine the number of higher appointments not only with reference to actual administrative needs, but also to provide an even flow of promotion for officers already in the service. In the proposals which we have now to make we have given constant attention to the principle that the Superior Staff must be limited to the number of officers required to fill the important and responsible positions in the Department *plus* a sufficient number of officers in training to hold such appointments. Accordingly having first determined the number of administrative and executive charges which the exigencies of the service demand, we then examined the existing scale to see whether it would meet the object which we had in view, namely, that officers should reach definite charges of importance at about eight years' service. The present sanctioned strength is 101 officers; and fortunately we are able to report that this figure should be neither increased nor diminished. Under our proposals, as set forth in Appendix C, the strength for administrative and executive purposes will indeed be reduced to 93; but if regard be had to the total number of officers required this reduction is nominal. Six appointments—one Superintendent and five Assistant Superintendents—will be transferred to the proposed Technical Branch, one Superintendent will be reduced by the appointment of an officer selected from outside the Department as Chief Store-keeper and another by the appointment of a Deputy Examiner, when the Examiner of Telegraph Accounts takes charge of the Check Office. These eight officers added to the 93 make up the present total of 101. Of the 93 officers 51 will hold charges of importance, *viz.* :—

Director-General	1
Directors	10
Superintendents in charge of Divisions	34
Superintendents in charge of Offices	4
Superintendent of Workshops	1
Personal Assistant to the Director-General	1
	51
	TOTAL

There will thus be 42 Assistant Superintendents; and from various calculations which we have made, but which it is unnecessary to set out, we are satisfied that a proportion of 51 officers in important charge to 42 officers in training will secure the object which we have in view, that is to say, the attainment of posts of suitable responsibility at a sufficiently early period of service.

Equalisation of emoluments in the Public Works and Telegraph Departments.

32. Reverting now to the history of the staff we observe that when the last reorganisation was carried out great importance was attached both by the Government of India and by the Secretary of State to the equalisation of pay and prospects in the Public Works and Telegraph Departments. From the Deputy Director-General downwards the pay of each class and grade was fixed so as to correspond with that of a grade or class in the former Department; and indeed we gather from a review of the whole correspondence that

the governing principle is that stated in the Secretary of State's despatch No. 7 (Telegraphs), dated the 27th February 1903, *viz.*, "that it is desirable, having regard to the existing method of recruitment of the Telegraph Department, that the prospects of advancement in it should not be inferior to those of the Public Works Department officers entering it." The ground for this principle clearly lies in the fact that the Superior Staff of both Departments was recruited from the Royal Indian Engineering College at Cooper's Hill. Since then, however, conditions have been altered, the College has been closed, and both Departments will in future obtain candidates from the open market.

Necessity for equalisation unaffected by the recent change in the method of recruitment.

33. The first question then is whether the recent change in the method of recruitment in any way suggests that the principle of assimilating the emoluments of the Public Works Department and Telegraph Officers should be abandoned or modified. We are of the opinion that this question should be answered in the negative. As regards the officers already in the service, the method by which the great majority have been recruited is the same as in the case of the Public Works Department Officers who, like them, were trained at Cooper's Hill; and a change which, from its nature, would apply only to future entrants, clearly ought not to be applied with retrospective effect to disappoint expectations on the strength of which present incumbents entered the service and which they have reasonably entertained throughout. This consideration alone should secure to Cooper's Hill men down to the latest recruit, that is to say for a period of more than thirty years, emoluments not necessarily equal to those of the Department of Public Works Officers in every grade of the service, but, on the whole, of not inferior value. As regards future entrants we have been informed that, although the method of recruitment has been changed, the new method will apply to Telegraph Officers and Public Works Officers alike, with the exception, however, that candidates for the Telegraph Department will be required to have spent at least one year as an Electrical Engineer or in some similar capacity. The necessity for parity of prospects thus remains at least as strong as it was before the abolition of Cooper's Hill; and it may be even stronger, if we are correct in the belief that the profession of Electrical Engineer is a growing one in the United Kingdom, and that the remuneration which may be expected by really competent Electrical Engineers is already very considerable. It would be lamentable if the Telegraph Department were to obtain a class of recruits either inferior to those entering the Public Works Department or composed of men of inferior promise from amongst those who aspire to Electrical Engineering as a profession.

Considerations bearing on the equalisation of the emoluments of the two Departments.

34. (i) It is unnecessary to adduce any reasons in support of the obvious remark that at the present time the Telegraph Officers in the higher grades are worse off than their Public Works contemporaries. The question is simply one of rates of pay, and the disadvantage of the Telegraph Officers is due to the fact that the increased rates granted in the Public Works Department to the officers in the administrative grades by Government of India, Public Works Department, Resolution No. 1101-E., dated 25th August 1905, have not yet been sanctioned for the Telegraph Department. This inequality should undoubtedly be removed at as early a date as possible.

(ii) We have, however, taken it into consideration another point, which is that, whereas the proportion of higher appointments in the Public Works Department (Chief and Superintending Engineers) is about 10 per cent. of the total

Engineering establishment, the proportion in the Telegraph Department will be raised under our proposals to a slightly higher figure. Out of a total strength of 99 Telegraph and Electrical Engineers (the Superintendents of Stores and the Check Office being excluded) we shall have 12 of a rank not below that of Superintending Engineer, *viz.* :—

- 1 Director-General of Telegraphs.
- 1 Director of Traffic.
- 1 Director of Construction.
- 8 Directors of Circles.
- 1 Electrical Engineer-in-Chief.

With a larger proportion of higher appointments it seems reasonable that the actual emoluments of the highest appointments below that of Director-General of Telegraphs should not be so great as in the Public Works Department.

possals of
Committee.

35. (i) On the whole, as a moderate and just proposal, we put forward the following scale; the present scale is also shown for the purpose of comparison :—

<i>Present scale.</i>		<i>Proposed scale.</i>	
	Rs.		Rs.
1 Director-General of Telegraphs at	3,000	1 Director-General of Telegraphs at	3,000
1 Deputy Director-General of Telegraphs at	2,000	...	
2 Directors at	1,800	2 Directors at	2,250
2 Deputy Directors at	1,600	2 Ditto	2,000
2 Chief Superintendents at	1,400	3 Ditto	1,750
2 Ditto	1,250	3 Ditto	1,500
2 Superintendents at	1,000	1 Electrical Engineer-in-Chief	{ 1,500—50—1,750 1,750—100—2,250
12 Appointments.		12 Appointments.	

(ii) The proposed scale may also be compared with the new scale in the Department of Public Works :—

<i>Public Works Department actual scale.</i>		<i>Telegraph Department proposed scale.</i>	
	Rs.		Rs.
Chief Engineer, 1st class	2,750	Director-General	3,000
Ditto 2nd „	2,500	...	
Superintending Engineer, 1st class	2,000	Director, 1st class	2,250
Ditto 2nd „	1,750	Ditto 2nd „	2,000
Ditto 3rd „	1,500	Ditto 3rd „	1,750
...		Ditto 4th „	1,500
		Electrical Engineer-in-Chief	{ 1,500—50—1,750 1,750—100—2,250

The local allowance of a Chief Engineer who is Secretary to a Local Government (Rs. 250 per mensem) or of a Superintending Engineer who is Secretary to a Local Administration (Rs. 150 per mensem) will have no counterpart in the Telegraph Department.

(iii) At present, taking the old rates of pay in the Public Works Department, the appointments of Director-General of Telegraphs, Deputy Director-General of Telegraphs and the two Directors correspond with those of Chief Engineers and the appointments of the Deputy Directors and Chief Superintendents with those of Superintending Engineers. The case is somewhat complicated by the abolition of the 3rd grade of Chief Engineers on Rs. 1,800 and

the rise in the pay of Superintending Engineer, 1st class, to Rs. 2,000, the same as that at present drawn by the Deputy Director-General and Rs. 200 per mensem more than that drawn by the Directors of Construction and Traffic. If the pay of the three officers next in seniority to the Director-General of Telegraphs were to be raised to Rs. 2,500, so that they would all receive the same pay as a Chief Engineer, 2nd class, expenditure, which is not, in our opinion, really necessary, would be incurred, the slight reduction as compared with the present Public Works scale in the emoluments of these appointments already noted as reasonable would not be secured, and there would be no sufficient interval between the pay of the Director-General and the pay of his immediate juniors. But while it is not necessary to give any of the three officers who are his immediate juniors the full pay of a Chief Engineer, 2nd class, as sanctioned in August 1905, none of them should draw less than that of a Superintending Engineer, 1st class, in the present scale of the Public Works Department or less than a Chief Engineer, 2nd class, under the old scale. We have solved the difficulty by proposing a class of two officers on Rs. 2,250 and another class of the same number on Rs. 2,000. It is true that in the Public Works Department there is no class on Rs. 2,250; but on the whole our proposals seem to us fair and sufficient. We have already recommended that the appointments of the Circle Directors and the Directors of Construction and Traffic shall be interchangeable, whatever their class; and we note here that their promotion will run by seniority from class to class whether they are employed in Circles or in the Direction.

(iv) We have dealt with the case of the Electrical Engineer-in-Chief in the portion of this Report which relates to the proposed Technical Branch. Excluding the expenditure on this post, the cost of the proposed reorganisation of the administrative grades is Rs. 3,150 per mensem or Rs. 37,800 per annum.

(v) The Circle Scheme involves the appointment of Circle Directors and it has therefore been incumbent upon us to make recommendations in regard to their pay. But we do not think that the cost of raising the emoluments of the administrative officers and of the Chief Superintendents who will now become Circle Officers is properly attributable to that scheme. We are of opinion that the claim of the administrative officers and the Chief Superintendents to equality of emolument with the officers of the Public Works Department of like rank was, in any case, irresistible, and must have been admitted at an early date whether there had been any Circle Scheme or no. The Director-General of Telegraphs raised the question very definitely in September 1905 and its consideration has been postponed pending the receipt of this Report.* It must, however, be allowed that the cost of raising one Superintendent, other than the Chief Superintendents, to the rank of Director (to provide for the charge of the eighth Circle) may fairly be charged against the Circle Scheme. This amounts to Rs. 6,000 a year.

Pay and promotion of Superintendents and Assistant Superintendents.

36. As regards the rest of the Superintendents and the Assistant Superintendents, we understand that proposals are under the consideration of Government for dealing both with the rates of pay of Public Works officers of corresponding positions and with the method of their promotion; and we strongly recommend that whatever decision may be come to in the case of the Public Works Officers shall be applied also to the case of the officers of the Telegraph Department. If this is not done, there is certain to be discontent either in the

* *Vide* correspondence ending with Director-General of Telegraphs' No. 117-G., dated the 7th July 1906.

one Department or in the other. We are further of opinion that a time scale similar in principle to those recently sanctioned for the enrolled list of the Finance Department and for the Forest Department would be suitable to the circumstances of the Telegraph Department also.

Pay of the Provincial Service.

37. So far, except by implication, we have made no reference to the Provincial Service which is part of the Superior Staff. We have assumed that if the pay and method of promotion are altered in the Public Works Department for men of the Imperial Service, they will be altered simultaneously on the same lines for Provincial Service men, the usual rule that the salary shall be less approximately by a third for men recruited in this country, being applied. Whatever may be the decision, we think that the Provincial Service men of the Telegraph Department should be treated as regards pay and promotion in the same way as men of the like service in the Public Works Department.

History of the Provincial Service.

38. (i) Apart from the question of remuneration there are certain important points connected with the Provincial Service on which we desire to offer our advice. The formation of this Service in the Indian Telegraph Department was directly due to the recommendations of the Public Service Commission of 1886-87, though the principle of filling some of the appointments in the Superior Staff in India had already been approved.* The Commission were impressed with the importance of maintaining the Telegraph Department in the highest degree of efficiency, not only in view of the great public services which it rendered both in war and peace, but also by reason of its obligations to foreign telegraph administrations. The absence of competition between rival systems in India made it necessary that the Department should be equipped to keep pace with the progress of science in other countries, while the paucity of local appliances called for highly trained and intelligent skill to devise expedients to meet unexpected emergencies. The Commission therefore proposed that recruitment in England should be continued on the scale then sanctioned (*viz.*, two officers per annum), but it was also recommended "that the gradual reduction of the staff recruited in England should be kept in view and that a superior Local Telegraph service should be recruited in India from classes to be established at one or more of the Indian Engineering Colleges." It was added that instead of adjusting the pay of officers locally recruited with reference to the pay of officers recruited in England, the pay and other conditions of the service locally recruited should be determined independently on the same principles as it was proposed to adopt for the Provincial Service.

(ii) The scheme for a Provincial Telegraph Service which was at first set forth was not entirely in consonance with the views of the Public Service Commission. The strength of the Superior Staff was then 84, and it was estimated that in order to maintain the service at that number it would be necessary to recruit three and four officers in alternate years.† It was proposed that two officers should still be recruited annually from Cooper's Hill, and that one and two appointments in alternate years should be filled up in India by promotion from the ranks of the Sub-Assistant Superintendents. Appointment from the Engineering Colleges was not recommended, more especially on the ground that such a system would afford no security as to the necessary physique and capacity of the recruits, and that they would have

* *Vide* Chapter IX, paragraph 127 of the Report of the Commission.

† *Vide* despatch of the Government of India in the Public Works Department, No. 14 (Telegraph), dated 8th September 1890.

to enter the Department without having received any preliminary training in telegraphy, which was regarded as essential. As to the pay of the officers locally appointed, it was proposed to adhere generally to the rule already laid down that the pay of such officers should be approximately two-thirds of the pay of officers of corresponding rank in the Imperial Service.

(iii) The scheme was not accepted in the shape in which it was first put forward.* The Secretary of State agreed with the Public Service Commission in holding that local recruitment should be made from the Indian Engineering Colleges, and considered it very important that in a Department, where a comparatively small Superior Staff directed the operations of a large and growing business, the selected officers should be possessed of the best professional training obtainable in India, and that scientific knowledge should form the principal qualification for employment. He expressed his willingness, however, to assent to the occasional selection for promotion to the Superior Staff of meritorious officers of the subordinate grade.

(iv) The scheme was therefore finally framed on this basis.† A Provincial Service recruited in India was established, the members of which were to be subject to the Indian leave and pension rules and to draw salaries at rates approximately two-thirds of those drawn by Imperial Officers of corresponding rank. Candidates were to be recruited from the Thomason College at Rurki and the other Indian Engineering Colleges, but all were to undergo a course of training for two years at the Thomason College. The number of appointments to be filled was ordinarily to be two and one in alternate years, but the number was liable to variation according to the requirements of the Department. Qualified students selected for appointment were to be first appointed as apprentices on Rs. 100 a month, and were then to remain on probation until they had proved their thorough fitness for service in the Department. As an occasional measure and subject to the approval of the Government of India in each case, a Sub-Assistant Superintendent who had displayed marked ability and merit might be promoted to the Provincial Service.

(v) To provide recruits for this Provincial Service a class, called the Electrical Engineer Class, was formed at Rurki. One nomination to this class was given to each of the Colleges at Sibpur, Madras and Poona—nomination being restricted to students who had not been in their respective Colleges for more than four months. The object of this restriction was to ensure that students passing directly into the class by the Rurki Entrance Examination should not be placed at a disadvantage.

Failure of the present system of recruitment.

39. (i) This method of recruitment has proved unsatisfactory. It has been found that none of the students who pass the Rurki Entrance Examination join the class; while practically no nominations are received from Poona and very few from Madras. The class therefore consists almost entirely of students from Bengal. The total number of students has never exceeded four, and has fallen as low as one. As the class is so small, it has been found impossible to prescribe for it a separate curriculum, or to devote specially to it the services of the College staff. A further drawback is that there is in the class a lack of that incentive to work which competition alone can afford, and

* *Vide* the despatches of Secretary of State, No. 23 (Telegraph), dated 27th November 1890, and No. 4 (Telegraph), dated 18th February 1892.

† *Vide* Resolution of the Government of India in the Public Works Department, No. 156-T.E., dated 25th August 1892.

though some good men have been recruited under this system the interests of the Department have suffered.

(ii) Another argument against this system of recruitment is that it finds favour neither with the Rurki nor with the Sibpur College authorities. Indeed in the interests of his own College Mr. Heaton, the Principal at Sibpur, has asked Government to relieve him of his nomination, and Major Atkinson, the Principal of the Thomason College, has addressed us and has pointed out how completely the present arrangements have failed. We have had further communication with both Principals and the papers which we have received from them have been inserted in Appendix H; the perusal of these papers is invited as they have a most important bearing upon the recommendations which we are about to make.

(iii) On a careful review of all the circumstances we are of opinion that the system of nomination by colleges should cease. We have considered whether it would be feasible to substitute a system somewhat similar to that commonly adopted by Local Governments for the recruitment of their Provincial Civil Services. The essential points in such a system would be (1) the nomination of candidates by the Director-General from lists submitted by Circle Officers after consultation with Local Governments; (2) the training of the candidates at Rurki; and (3) the appointment to the Provincial Service of those who were most successful in the final examination. We have come to the conclusion, however, that a class composed of a few nominees would be open to one of the objections to the present system, *viz.*, want of real competition among the students; and that if men were prepared for the Telegraph Department alone unsuccessful students would have no alternative career open to them. On the other hand the fitness of the candidates as regards physique and social standing, which nomination by the responsible officers of the Department would secure, can, we think, be secured otherwise.

Proposal that
the Director-
General of Tele-
graphs shall
select from
Indian Engi-
neering Col-
leges.

40. While we would guard against the serious defects which have come to our notice, we would maintain the principle of selection from Indian Engineering Colleges asserted by the Secretary of State. Hitherto the candidates have been nominated by authorities who have not been in a good position to gauge the requirements of the Telegraph Department; and from these candidates those with the greatest aptitude for paper work have been selected. We propose that in future there should be no prior nomination of candidates but that appointments should be made by the Director-General of Telegraphs by selection from the students who qualify in mechanical and electrical engineering in the Engineer Departments of the Indian Engineering Colleges. To bring this proposal into effect it is necessary that (1) mechanical and engineering classes should be organised, and (2) that the standard of instruction should, in the opinion of the Director-General of Telegraphs, be sufficiently high to justify the selection of telegraph candidates from the classes formed. As will appear from Appendix H, the Principal of the Thomason College contemplates the establishment at that institution of an electrical and mechanical engineering course in order to meet the great demand which is now springing up in India for men properly qualified in these subjects. It is anticipated that the proposed class will attract a considerable number of students, as the field of employment for well trained men is already large and will increase. Major Atkinson has described in detail how his proposed class will be organised and taught. At Sibpur it is intended to teach the necessary

subjects up to the standard of the Bachelor of Engineering degree in the Calcutta University. As soon as these proposed arrangements are brought into force we think that selections may be made from both Rurki and Sibpur. If it is shown that equally suitable arrangements already exist or are at any future time brought into force at the Madras and Poona Engineering Colleges, the field of selection should include those institutions also. The selections would be subject to approval by the Government of India in accordance with the rule contained in paragraph 1 of Chapter B of the Telegraph Code which requires that appointments of officers in India to the Provincial Service of the Department shall be made by that authority.

Instruction in
Telegraph
Engineering
at Rurki not
necessary.

41. We have to add with reference to a minor point mentioned in Major Atkinson's memorandum in Appendix H, that we do not consider that any advantage would be gained were candidates to remain at Rurki after selection in order to obtain practical instruction in telegraph engineering. They could be taught their business in this respect better in practical work, and their theoretical training at College should enable them to master it quickly and thoroughly. Immediately after selection the candidates should be posted to a Division as probationers and should begin to learn the work of the Department in the usual way.

Admission
of Upper
Subordinates
to the Provin-
cial Service.

42. (i) We have already referred to the rule relating to the promotion of Upper Subordinates to the Provincial Service and we may quote it here. It is as follows :—*

"As an occasional measure and subject to the approval of the Government of India in each case, a Sub-Assistant Superintendent, who has displayed marked ability and merit, may be promoted to a suitable grade of the Provincial Service and may be granted a personal allowance to protect him from loss of pay."

(ii) Up to date only one appointment has been made under this rule.† But if higher rates of pay attract a better class of men to the Signalling Establishment and if the improvements which we are about to propose are adopted in respect to the selection and training of Sub-Assistants we hope that suitable candidates for promotion to the Provincial Service may be found within the Department and that the rule will cease to be a dead letter. We do not propose any revision of the rule; but should it prove feasible to make even a very few appointments under it, great encouragement would be given to the whole subordinate establishment and doubtless recruitment would be improved.

43. (i) We come now to the consideration of paragraph 14 (4) of the Resolution of the 25th September 1906 which stands thus :—

Whether the existing system of recruitment, training and duties of the Upper Subordinate establishment is satisfactory and, if not, what changes should be made.

Description of
the Upper
Subordinate
establishment

(ii) There are two classes of Upper Subordinates, the Sub-Assistant Superintendents (General) and the Traffic Sub-Assistant Superintendents. In this Report, for the sake of brevity, the former are referred to as Sub-Assistants and the latter as Traffic Sub-Assistants unless the context requires a fuller designation. The Sub-Assistants are 72 in number distributed in

* Government of India, Public Works Department, Resolution No. 156-T.E., dated the 25th August 1892, Rule VI.

† Mr. T. D. Marston was promoted to the Provincial Service on February 6, 1899, and retired on March 24, 1905.

two grades of 36 each, the pay of the first grade rising from Rs. 275 by annual increments of Rs. 15 to Rs. 350, and of the second grade from Rs. 250 to Rs. 275 by like increments of Rs. 5. In addition Sub-Assistants are eligible after five years' approved service in the first grade for an increment of Rs. 50 per mensem and for a second increment of the same amount after ten years' like service therein. Thus the maximum pay attainable is Rs. 450 per mensem. Traffic Sub-Assistants, who are 20 in number, have a fixed salary of Rs. 350 per mensem and are not eligible for these increments, which are, however, drawn by a few men who have been transferred from the General to the Traffic List and were previously in receipt of them. The Honorary Assistant Superintendents are included in the sanctioned number of the Sub-Assistants, Traffic and General, and draw the same pay. The two classes of Sub-Assistants have entirely different duties, the Traffic Sub-Assistants being employed in signal offices and the other Sub-Assistants in Sub-Divisional work or on construction duty, or in some cases on miscellaneous duties as, for instance, in the Store-yard. As noted in paragraph 11, when in charge of a Sub-Division a Sub-Assistant gets a charge allowance of Rs. 30 per mensem.

Recruitment,
training and
duties of Traffic
Sub-Assistants.

44. (i) The Traffic Sub-Assistants are recruited by selection from the first grade of Telegraph Masters. Appointments to the general class are made by selection from Telegraph Masters and signallers and, as a rule, from those of the Superior Grade of not more than 35 nor less than 28 years of age.

(ii) The Traffic Sub-Assistants after their promotion continue to perform duties to which they have long been accustomed as Telegraph Masters, but their responsibilities are greater as they are in charge of larger offices. Elsewhere * we have dwelt on the necessity of relieving Telegraph Masters as much as possible of clerical work and of insisting upon active supervision. These remarks apply with additional force to the case of Traffic Sub-Assistants. No change in the method of their recruitment is necessary; except that the selection should not be restricted to the first grade of Telegraph Masters, but should extend to all permanent Telegraph Masters whatever their grade. It is, however, essential that men selected to be Traffic Sub-Assistants should (1) have had adequate experience as Telegraph Masters; and (2) should still be sufficiently young to be at their best in point of energy and efficiency.

(iii) It is a matter of complaint that their pay cannot reach the same maximum as that of the other Sub-Assistants. Having regard to the great importance of traffic, and therefore of the staff whose whole employment is concerned with the supervision of traffic, we think that this disadvantage should be removed and that a first grade of Traffic Sub-Assistants should be formed consisting, for the present, of four appointments on a fixed pay of Rs. 450 per mensem. Four of the existing appointments on Rs. 350 would be absorbed in this grade and the remaining sixteen appointments would constitute a second grade in the class. Promotions to the proposed first grade should be made strictly by selection from amongst the class, so that the incentive to exertion will be general. The creation of a first grade will enable the Director-General of Telegraphs to provide satisfactorily for the posting of selected Traffic Sub-Assistants to exceptionally large offices such as Karachi and Rangoon. When the Director-General of Telegraphs is of opinion that any addition should be made to the number of Traffic Sub-Assistants he should bring forward each proposed addition on its merits. We have no

* Vide paragraph 140 below.

doubt that eventually additions will be necessary; but if (1) the new grade on Rs. 450 be sanctioned, and (2) men are promoted at an earlier period of service, as we propose, we think the additions should be made by forming a new grade on Rs. 300 per mensem, and not by increasing the number of appointments on Rs. 350. Elsewhere we have suggested (paragraph 21 above) that when a Traffic Branch is formed one-third of the appointments therein should be open to Traffic Sub-Assistants if fully qualified men are obtainable.

Disadvantages
of Sub-Assis-
tants on the
General List.

45. Coming now to the General List, we have received a very large amount of evidence regarding the qualifications of Sub-Assistants for Sub-Divisional charge and construction duty. It may be freely acknowledged that many of these men have succeeded admirably in the discharge of duties which were new to them; but as a class all have laboured under some serious disadvantages. In the first place they have often been selected at a time of life when it is difficult to acquire rudimentary knowledge in new subjects. Secondly, as we have noted in describing the Circle Scheme, there has been embarrassment when a Sub-Assistant in charge of a Sub-Division has been brought into official relations with officers of other Departments superior to him in rank. Thirdly, there has in many, perhaps in most, cases been a want of practical training in inspection duties and active out-door work for which the experiences of the signal room have been no preparation. Fourthly, these Sub-Assistants have had no systematic and particularly no theoretical training in the elements of mechanical and telegraph engineering necessary for their work; and have had to pick up the irreducible minimum of such knowledge chiefly from their subordinates and to learn it by rule of thumb. This last disadvantage is, we think, the most serious of all; and no proposals for the improvement of the class would be satisfactory that did not remove or at least minimise this defect.

Measures
proposed for
removing the
disadvantages.

46. (i) As to the first disadvantage we are of opinion that the class should be recruited strictly by selection, not specially from the Superior Grade of Telegraph Masters and signallers which, under our proposals, will gradually disappear, but (subject to what is said below as to qualification by employment as Inspecting Telegraph Masters) from any part of the list of the signalling establishment below the rank of Traffic Sub-Assistant. We would alter the minimum age limit from 28 to 25 leaving the maximum limit at 35, but we think particular care should be exercised before any candidate over 30 is selected. Indeed we should have preferred a limit of 25 to 30 years of age were it not that this reduction might disappoint just expectations already formed.

(ii) With the abolition of Sub-Divisions the second disadvantage will disappear.

(iii) It is, we believe, a fact that amongst the most successful Sub-Assistants are those who before promotion have served as Inspecting Telegraph Masters. We are so much impressed with the desirability of practical training in active out-door duties that we think that, as a rule, Sub-Assistants for the General List should be selected from amongst men who have held the appointment of Inspecting Telegraph Master. This will necessarily involve special discrimination in appointing signallers to these posts. We do not here modify our recommendation that the selection of Sub-Assistants General should be made from any part of the list of the establishment as above defined; for the qualification is secured if the experience is gained at any time. A man who had been Inspecting Telegraph Master and was promoted to be a permanent Telegraph Master would, of course, be eligible. Similarly, if it were desired to

push on some young signaller, it would always be practicable to make him an Inspecting Telegraph Master in order that he might qualify.

(iv) Under present arrangements the Sub-Assistants here in question are appointed on probation for one year and are required before confirmation to pass a departmental examination in certain subjects defined in Chapter B, paragraph 4, of the Telegraph Code. We think that the period of probation should be extended by six months, so that these Sub-Assistants may have an opportunity of obtaining elementary theoretical instruction. We have been in communication on this subject with the Principal of the Civil Engineering College at Sibpur and annex, in Appendix H, a note which he has given us. It will be observed that the Sibpur authorities are prepared to undertake the instruction of Probationary Sub-Assistants to the extent required. We wish to acknowledge most cordially the liberal spirit in which the Principal and the Professor of Mechanical and Electrical Engineering have met our views in this important matter. It will be seen that the probationers can attend the College from the third Monday in June to the first Monday in August, these dates being approximate. They would then return to their ordinary duties till the beginning of the following December when their studies would be resumed till the end of April. It would be unnecessary for them to present themselves at the College examination as the departmental examination would be quite sufficient. In this way their period of instruction would be about $6\frac{1}{2}$ months in duration, which we consider to be very suitable. It is not necessary for us to discuss the course of studies mentioned by the Principal, though we may remark that it is a question to what extent the probationers should receive elementary instruction in electrical engineering and that it is doubtful whether simple electrical testing need be one of the subjects taught. The actual course would be settled by the Director-General of Telegraphs and the Principal of the College in consultation. We strongly recommend that the period of probation be extended from one year to eighteen months, as we have proposed, and that the offer made from Sibpur be accepted.

Further
improvements
and the results
anticipated.

47. (i) By these means we hope to remove the disadvantages under which the Sub-Assistants have heretofore laboured. Two other recommendations may be made, the first affecting the nomination and the second the examination of candidates. As is substantially the rule at present, Divisional Superintendents should submit to the Circle Officer nomination rolls of the men whom they consider best fitted for promotion. But it is important that the Circle Officer should personally interview these nominees, and no nomination should be accepted without a report of the result of the personal interview. On submission of the rolls with the opinion of the Circle Officers, the Director-General of Telegraphs would select the number required. The present departmental examination should, as we have already explained, continue to be held at the end of the probationary period; but to secure uniformity and adequacy of standard, the examination papers should be set under the orders of the Director-General of Telegraphs.

(ii) We believe that if the above methods of selection and training are adopted, it will be quite possible to raise the efficiency of the Sub-Assistants to a higher level. Should this expectation not be realised it may become necessary to consider whether some or all of the appointments should be thrown open to men outside the Department. We should view such a result with much regret. It would be a serious discouragement to the staff if this avenue of promotion were even partially closed to them; and with a field of selection

so wide as that which the Signalling Establishment provides it seems only reasonable to suppose that suitable candidates will be forthcoming, especially if the improvement of the pay of the establishment recommended in the next Chapter secures the enlistment of a better class of signallers.

(iii) As regards any changes which should be made in the duties of these Sub-Assistants, it is only necessary to refer generally to our description of the Circle Scheme.

CHAPTER III.

REORGANISATION OF THE SIGNALLING ESTABLISHMENT.

48. (i) In the preceding Chapter we have discussed certain questions relating to the Superior Staff and the Upper Subordinates. The questions which we have to consider with regard to the Signalling Establishment come rather late in the list of points of reference set forth in paragraph 14 of the Resolution of the 25th September last. But it will be most convenient to insert our proposals for the improvement of the Signalling Establishment in this place so that the whole of our recommendations for the reorganisation of the principal establishments in the Indian Telegraph Department, with the exception of the Line Establishment with which we shall deal in Chapter V, may be read consecutively. The questions put to us on the subject of this Chapter form items (9) and (10) of the points of reference. Item (9) is as follows:—

(9) *What changes should be made to improve the existing organisation of the signalling establishment, and in particular—*

- (a) *whether strictly local and non-pensionable services should be formed in the Presidency towns and other large centres;*
- (b) *whether female signallers should be employed in the Department, and if so, to what extent and under what restrictions;*
- (c) *what alterations should be made in the present mode of classification and remuneration of signallers, and to what extent their earnings should be regulated by their actual outturn of work by the general introduction of "pie-money" or some similar system.*

Present organi-
sation of the
Signalling
Establishment.

(ii) The history of the organisation of the Signalling Establishment has recently been laid before the Government of India in great detail by the Director General of Telegraphs* and it is unnecessary to recapitulate the narrative here. It will be sufficient if a brief description of the existing organisation is given, so far as that is necessary to explain our proposals. We annex (Appendix I) an analysis of the establishment as it stood on the 1st April 1906, and tables showing the existing rates of pay. The present organisation is somewhat complicated. The staff is divided into two branches, *viz.*, the General Scale, members of which are liable for service anywhere in India and Burma, and the Local Scale, which consists of signallers engaged for service within the province in which they are recruited. Both the General Scale and the Local Scale are divided into four grades, known as the Superior, Good, Average, and Indifferent Grades, and for each grade in each scale a separate rate of pay is laid down increasing by annual increments from the first to the sixteenth year of service when the maximum is attained. The receipt of the annual increment is dependent on the passing of a test in signalling. Signallers on first joining the Department are appointed to the Average Grade, the initial pay of which is Rs. 40 per mensem in the case of the General Scale and Rs. 35 per mensem in the case of the Local Scale. The Indifferent Grade is a punitive grade; no signaller is ever appointed directly to it, but signallers may be reduced to it for misconduct. Promotion to the Good and Superior Grades is granted on the result of a general examination which is usually held

* *Vide* the letter from the Director General of Telegraphs to the Government of India in the Commerce and Industry Department, No. 143-T., dated the 31st July 1906.

every five years. The number of appointments in the Superior Grade (minimum Rs. 60, maximum Rs. 195, General Scale, and minimum Rs. 50, maximum Rs. 130, Local Scale) is limited to ten per cent. and in the Good Grade (minimum Rs. 50, maximum Rs. 162, General Scale, and minimum Rs. 42, maximum Rs. 108, Local Scale) to thirty per cent. of the total strength of the Signalling Establishment. Vacancies in each grade are filled up from the men who have obtained the required proportion of marks in the general examination. The time at which a signaller can obtain promotion to the Good and Superior Grades depends on the period which elapses between his recruitment and the occurrence of a general examination, and also on the number of vacancies. It follows from this that the bulk of the signallers of five years' service and under must always be in the Average Grade, and that the proportion of men in the Superior and Good Grades is highest in the later years of service.

(iii) We would solicit particular attention to this concentration in the Average Grade of the bulk of the signallers of five years' service and less, because it has important consequences. If the Traffic Sub-Assistants and the 1st Grade Telegraph Masters be excluded, there were, on the 1st April 1906, 2,598 men in the Signalling Establishment, of whom 242 were in the Superior Grade, 742 in the Good Grade, 1,609 in the Average Grade, and 5 in the Indifferent Grade, the percentages of the establishment in each grade being 9.3, 28.6, 61.9, and .2, respectively. But of the men of five years' service or less only 1.1 per cent. were in the Superior and 6.1 per cent. in the Good Grade; of the men of six to fifteen years' service 8.7 per cent. were in the Superior and 35.1 per cent. in the Good Grade, while of the men of sixteen years' service and upwards 21.5 per cent. were in the Superior and 51.1 per cent. in the Good Grade. From these figures it will be clear that for the first five years of his service the pay of a signaller is for practical purposes the pay of the Average Grade, that for the next ten years the distribution between the grades is approximately normal and the average pay about midway between the Average and Good Grades, and that thereafter the average pay is practically the pay of the Good Grade. Reference will be made to this point again.

Defects of the existing system.

49. The existing system has, we consider, very serious defects and reorganisation is urgently called for. A signaller who is content to remain in the Average Grade throughout his service can reach a maximum of Rs. 130 a month in the General Scale and Rs. 87 in the Local Scale, but promotion to a higher rate of pay can be obtained only through the Grade Examination. Such a system of promotion could be successfully worked, if at all, at any rate only in a comparatively small service; but the Signalling Establishment is now so large that the examination has become unwieldy, and in fact threatens to break down altogether. At the last examination, which was held in 1903, so numerous were the candidates (1,716) that an officer had to be placed on special duty for nine months to conduct it, and it became impossible to hold the examination simultaneously for all. The result was that more than one series of papers had to be set, and this necessarily involved the risk of unfairness, because it was impossible to ensure that the standard of difficulty should be the same in all cases. The character of the examination constitutes another grave objection to the present system. The subjects in which candidates are examined are Signalling, Hand-writing, Dictation, Arithmetic, Algebra (up to Quadratic Equations), Elementary Trigonometry, Geography, Electricity,

Magnetism, knowledge of instruments and knowledge of Traffic Rules. An examination which includes so much educational matter is not of a sufficiently practical character to be a satisfactory test of the fitness for promotion of persons already in Government service. For the work of the Department it is not necessary that signallers should be proficient in Algebra, Trigonometry, Geography, Electricity and Magnetism, and it is undesirable that promotion should be given for qualifications which do not bear directly on the efficiency of the operator or Telegraph Master. Promotion ought, on the contrary, to be the reward of the sort of efficiency which Government demands from the class of officer concerned. We think that the system of promotion by examination should be altogether abolished, and that some system should be substituted, which will have the effect of securing higher emoluments for the sort of skill which is really required, and not for the sort of school-boy skill in passing examinations which grows less as men grow older.

Proposed abolition of the grades and Grade Examination.

50. The abolition of the examinations necessarily involves the abandonment of the present classification into grades. This is no matter for regret, for the quadruple classification of signallers is a needlessly cumbrous expedient, and the names of the different grades are invidious. To brand a signaller as "Indifferent," not necessarily because he is a bad operator, but because he has committed an offence, appears to us to be indefensible; and we can see no reason for styling one operator "Superior" and another "Average", when both can turn out work at the same speed and with equal accuracy. The title "Average" is itself unfortunate, and any system which keeps sixty per cent. of the staff on average pay is not run on sound commercial lines, because it is highly probable that under such a system only average work will result.

Proposed extension of the period for increments.

51. Another defect in the existing system is the fact that the annual increment ceases after the sixteenth year of service. Thereafter if a man is not selected for promotion to Telegraph Master, he has little incentive to exertion; and many will probably be content with the lowest outturn of work which is sufficient to avoid punishment. It would not be possible to provide for the continuance of the increment up to the very end of a signaller's service, but we think that he should be able to look forward to some further increase of his emoluments as the reward of really efficient work, even after he has received the last of the ordinary increments. The desirability of offering some further inducement to signallers who have passed the sixteenth year of service will probably be even greater in the future than it has been in the past. Hitherto the number of Telegraph Masterships has increased automatically in a fixed proportion to the number of signallers entertained. We shall propose that this system be abandoned, but the consequence of its abandonment must inevitably be that men will have to wait longer, after attaining their maximum pay as signallers, before they can obtain promotion. The advisability of extending the incremental period is therefore obvious.

Inadequacy of present rates of pay.

52. (i) Not only, however, is the organisation of the Signalling Establishment defective, but the existing rates of pay are, we consider, inadequate. The rates of pay of the four grades in the General Scale have actually remained unchanged since the year 1865. During the period of forty-two years which have elapsed since that date, the expenses of living have increased enormously, especially in the towns, and it is in the towns that the great bulk of the signallers are ordinarily stationed. In consequence of the rise of prices it has

been found necessary to increase the scale of salaries in almost every Department of the Government service, while owing to the commercial and industrial development of India there are now hundreds of appointments on comparatively high rates of pay in the service of mercantile firms and private individuals which did not exist forty years ago. The natural result is that men who would formerly have been glad to enter the Telegraph Department are now unwilling to do so, because they can obtain far more remunerative employment in other branches of work. In recent years recruitment for the General Scale has become increasingly difficult, and we have been deeply impressed by the evidence which we have received in all parts of the country as to the inferiority of the recruits now obtained as compared with those obtained formerly. This is not a state of affairs which Government can afford to regard with equanimity. Traffic is now growing at a rate altogether unprecedented, and with each succeeding year the strain on the energy of the signaller must become more severe. When the increase of work is accompanied by deterioration of the staff the position seriously threatens the convenience of the public. The disposal of traffic will necessarily be hindered if the staff is inefficient or discontented. Nor is it only the actual operators who have to be considered; in recruiting for the Signalling Establishment it is necessary to obtain not only men who possess the capacity for acquiring the skill of the operator and the elementary educational qualifications required from signallers, such as a knowledge of English and a clear hand-writing, but also men who are likely to become fit for promotion to Telegraph Master and to Sub-Assistant Superintendent. We have in other parts of this Report* laid great stress on the necessity for improving supervision in order to ensure the economical and rapid disposal of traffic; and we do not hesitate to say that this supervision will not be secured unless the Department can recruit as signallers a proportion of men of a better stamp than can be obtained on the existing rates of pay.

(ii) These considerations apply with special force to the General Scale, but they are also applicable to the Local Scale. The pay of the Local Scale as fixed in 1875 was at every stage as nearly as possible two-thirds of the General Scale pay. By the year 1902, however, the insufficiency of the sanctioned rates during the early years of service had become apparent, and a new scale, which is shown in Appendix I, was sanctioned for the first nine years. The increase in the initial pay amounted to Rs. 8 in the case of the Average Grade, Rs. 9 in the case of the Good Grade, and Rs. 10 in the case of the Superior Grade, but the annual increments having been made somewhat smaller, the same rate of pay was reached in the tenth year of service as in the old scale, which remained unchanged from the tenth to the sixteenth years. The alterations made in 1902 have undoubtedly done much to improve recruitment, but we think that some further amelioration of the rates of pay is still required in order to ensure that all signallers shall possess that knowledge of English which is indispensable for the rapid and accurate disposal of telegraph work. It is in this point that the Local Scale signallers are most deficient and the growth of traffic makes it imperative that there should be an improvement in this respect.

(iii) In the case of the General Scale the insufficiency of the existing rates of pay is most marked during the early years of service. This is due, as has already been pointed out, to the fact that for the first five years nearly all the

* *Vide* paragraphs 44 above and 140 below.

signallers are in the Average Grade. Theoretically ten and thirty per cent. of the signallers of each year should draw Superior and Good Grade pay, but in fact on the 1st April 1906, out of 632 General Scale signallers and Telegraph Masters of five years' service or less, only one was in the Superior Grade and only twenty in the Good Grade. The pay of an Average Grade signaller rises from Rs. 40 in the first to Rs. 56 in the fifth year by annual increments of Rs. 4, and we are convinced that these rates of pay are altogether inadequate. On this point the evidence we have received admits of no doubt. Nothing less than Rs. 50 can be taken as a living wage for a European or Eurasian lad when he first enters the Department, and candidates of a good stamp will expect an annual increment of at least Rs. 5 for the first five years, and a somewhat larger one thereafter. It is the low initial pay which is the chief obstacle to the recruitment of the General Scale, and the letters received from the Headmasters of European Schools in all the great Provinces of India, whom we consulted on this subject, strongly support this conclusion. We shall refer later* to recruitment from telegraph classes to be formed in European Schools, but we desire to say here that we attach great importance to the advantages of this method of recruitment, and that some increase in the rates of pay is a necessary preliminary to its application.

Principles observed in framing proposals for the reorganisation of the Signalling Establishment.

53. (i) No question that has come under our consideration has proved more intricate and difficult than that of the reorganisation of the Signalling Establishment, and we have devoted to it much anxious thought and care. The existing organisation is so complex, and the factors which have to be considered so numerous, that the task of producing a scheme which will at once be workable, simple and logical, is one of no little difficulty. The whole subject was fully discussed with the Director General of Telegraphs in December last,† and we desire to acknowledge the very valuable assistance which we have received from our consultations with him. We have not been able to adopt the proposals which he laid before us in their entirety chiefly on account of the great cost of them; but we are deeply indebted to him for the full and suggestive manner in which he treated the subject. For the reasons given in the foregoing paragraphs we consider it essential that the scheme of reorganisation should provide for the abandonment of the system of promotion on the results of an examination, the abolition of the so-called Conduct Grades, the extension of the incremental period beyond sixteen years, and the improvement of the pay of the service as a whole, particularly during the first five years of service. In every one of these points we have the strongly expressed support of the Director General of Telegraphs. But in framing our proposals we have been guided by other considerations also which must be enumerated here.

(ii) It is clearly desirable that such improved rates of pay shall be fixed as will admit of the whole, or nearly the whole, of the existing staff being immediately absorbed in the new scale. The inconvenience of having two scales of pay—the old and the new—in existence at the same time is obvious, and should be prevented as far as possible. This conclusion at once limits the extent to which the existing arrangements can be modified. We have not to lay down an ideal scale of pay which might have been adopted if the Department were now being brought into existence, but to

* *Vide* paragraphs 86 and 87 below.

† *Vide* Part VIII, Vol. II, of the Proceedings, pages 2 to 20.

devise a scheme offering reasonable prospects to future entrants and adhering, as closely as may be, to the present rates of pay,

(iii) Some other principles have had weight with us in framing our proposals. On the one hand the interests of Government and of the taxpayer demand that where an increase of pay is given a higher standard of efficiency should be insisted on, and on the other hand justice requires that the staff should not be deprived, without compensation, of any privilege which they now enjoy. It is a good feature of the present system that it rewards merit, even during the early years of service, if a grade examination is held opportunely and successfully passed; but a prominent defect is that the system rewards the wrong sort of merit. Success in an examination is followed by the enjoyment of Good or Superior Grade pay for the remainder of a man's service; there is thus a strong inducement to work for the examination, but there is no guarantee that success in it will be followed by any better practical work. If the grade system is abolished, promotion will be made mainly by seniority, and the inducement to work for the examination will be removed; but other and more suitable means can be employed to insist upon or encourage industry and to reward skill of the kind really required. For these reasons we shall propose first a review of the work of individuals at certain periods of service and the withholding of promotion when not deserved; and secondly, the grant of extra allowances for special work requiring additional qualifications in the men who are actually employed upon it. As to the maintenance of existing privileges, an important feature of the present system is that every signaller has the prospect of rising as such to a maximum pay of Rs. 195. We have held it to be inequitable to deprive the staff of this advantage; but we have endeavoured to ensure that the highest rates of pay shall be obtained only by the most efficient members of the establishment.

Description of
the scheme
proposed and of
its advantages.

54. (i) In the scheme which we now submit for the consideration of Government we propose that the pay of the Good Grade should be the pay of all future entrants into the Department in both scales. In the case of the General Scale this is the minimum rate which is likely to secure the recruitment of suitable candidates, and we can find no satisfactory grounds for according different treatment to the Local Scale. This proposal has, we think, two very decided advantages over any other that has been brought to our notice. Of these the first is that the increase in the average emoluments of signallers will be highest proportionately at the outset. The pay of an Average Grade signaller is in the case of the General Scale exactly and in the case of the Local Scale approximately four-fifths of the Good Grade pay. At present the proportion of Good Grade signallers and Telegraph Masters to Average is one to two, so that to give all signallers and Telegraph Masters in these two grades the Good Grade pay means an increase of the average emoluments by 15·4 per cent. But owing to the unequal distribution of the men in the grades at the different periods of service it will be found that, if the figures of 1st April 1906 are taken as a basis, the increase in the average pay of the Good and Average Grade signallers and Telegraph Masters of five years' service or less would actually have been 23 per cent., of those of six to fifteen years' service 14 per cent., and of those with sixteen years' service and upwards 7·5 per cent. The universal adoption of the Good Grade scale of pay has therefore this advantage that the most substantial increase is given where it is most

required. For a reason to be explained the Superior Grade signallers and Telegraph Masters have been excluded from these calculations.

(ii) The second advantage is, that in no other way can so large a proportion of the existing staff be brought at once and without difficulty upon the new rate of pay. The whole of the existing Good Grade, and any signallers who may have passed the examination for the Good Grade but have not been appointed for want of vacancies, could, of course, be absorbed immediately, but in accordance with the principle that higher wages should only be given for more efficient work, we propose that no signaller at present in the Average Grade shall receive the benefit of the improved rates until he has passed the signalling test at 23 words a minute. The same test ought, we consider, to be enforced in the case of all future entrants to the Department. The evidence we have received leads us to think that most of the Average Grade signallers will succeed in passing at 23 words, but probably the senior men will have most difficulty in doing so. In order, therefore, to prevent undue hardship we think that the Director General of Telegraphs may be permitted to sanction a relaxation of the rule in the case of any signaller who is drawing the maximum pay of the Average Grade and has completed twenty years' approved service. All permanent Telegraph Masters should be brought at once upon the new scale of pay.

(iii) We are unable to devise any satisfactory scheme by which the men at present in the Superior Grade can be brought upon the new scale of pay, and we recommend that they should remain on their present footing, the grade being left to die out as they are promoted or retire. Two classes of signallers will thus be excluded from the new scheme, *viz.*, (1) the existing Superior Grade, and (2) signallers of the Average Grade who fail to pass by the 23 words standard. To these must be added a third class but a very small one. Our proposals involve the abolition of the Indifferent or punishment grade, other means of punishment, when necessary, being afforded by the stoppage of increments or of promotion from class to class. On the 1st April 1906 there were, as mentioned in paragraph 48 (iii), only five signallers in this grade. The few men who may be on the pay of this grade when the new system is introduced should remain on that pay until they are recommended for promotion. When so recommended they should be restored to the positions which they would have held before the reorganisation, and when they pass by the 23 words standard should be admitted to the new scale of pay. We regret that the absorption is not absolutely complete, but we are satisfied that it is impossible to proceed further in this direction with due regard to efficiency and economy.

(iv) We propose to compensate the establishment for the ultimate abolition of the Superior Grade and to provide for the extension of the incremental period in the following way. The maximum to which a General Scale signaller on Good Grade pay can attain is Rs. 162, which is reached in the sixteenth year. We propose that signallers after drawing Rs. 162 for two years shall be eligible for a first special increment of Rs. 10 which will bring their pay to Rs. 172, and after two more years for a second special increment of Rs. 13 which will bring their pay to Rs. 185. Similarly a Local Scale signaller after drawing Rs. 108 for two years will be eligible for two special increments of Rs. 6 each, making his pay Rs. 114 and Rs. 120. The number of men drawing these special rates of pay should, we consider, be limited to 10 per cent. of the

entire Signalling Establishment as in the case of the present Superior Grade. During the intermediate stage when the Superior Grade is dying out, the limitation of 10 per cent. should include both the men in the Superior Grade and the men in receipt of the special increments. The average pay of the men in the Superior Grade on the 1st April 1906 was (excluding Telegraph Masters' allowances) Rs. 186·2 in the case of the General Scale and Rs. 101·5 in the case of the Local Scale. The Examiner has calculated that the average cost of the salaries of the men in receipt of the special increments will be Rs. 176·6 and Rs. 116. The cost of the two special increments will therefore be approximately the same as that of the present Superior Grade.

Proposed equivalent of the Efficiency Bar.

55. As we have already indicated, we consider it a matter of great importance that the organisation of the establishment should provide for the periodical review of the work and character of the signallers, so that the promotion of men whose conduct has not been satisfactory may be stopped. We understand that in the United Kingdom this result is attained by what is known as the "Efficiency Bar" which is imposed when a signaller's earnings amount to forty-four shillings a week. The fitness of each man for promotion is then thoroughly examined, and, if the decision is adverse, he receives no further advancement for the rest of his service. We do not consider it necessary or advisable to impose such a rigid restriction in the case of the Indian Telegraph Department. We propose that during their first sixteen years of service signallers should be divided into three classes:—

General Scale.	Local Scale.
(1) Rs. 50 to Rs. 75.	Rs. 42 to Rs. 57.
(2) Rs. 82 to Rs. 112.	Rs. 60 to Rs. 75.
(3) Rs. 122 to Rs. 162.	Rs. 81 to Rs. 108.

The men in receipt of the special increments will constitute an additional or highest class. Elsewhere in this Report* we advocate the abolition of the annual signalling test, the passing of which is at present the condition of the receipt of each increment. In future, after the first two years of service, the increment should be granted as a matter of course, unless it is withheld as a punishment for specific cases of bad work or misconduct. But promotion from class to class should not be granted except as the reward of thoroughly approved service, after a review of the record of each man as regards work and character during the preceding quinquennium. We do not consider, however, that the promotion of any man should be finally stopped until he has reached Rs. 162 (General scale) or Rs. 108 (Local Scale), and we would therefore, provide that the cases of men whose promotion has been refused should be reviewed annually until they qualify for promotion by better work. Admission to the highest class will be obtained, not only by approved service, but also by the possession of special qualifications.

Proposal to grant allowances for special qualifications.

56. (i) We propose that allowances in addition to pay should be granted to signallers who are in possession of certain qualifications which the Department needs, but which it does not require all the signallers to possess. We believe that the grant of such allowances will prove most beneficial to the Department and that in the long run they will be found to be economical. It is in every way desirable that the members of the staff should be encouraged to make themselves proficient in difficult and delicate work, and that the

* Vide paragraph 89 below.

desire to excel should be fostered. But the extent to which the allowances are actually required will be automatically fixed and unnecessary expenditure will be avoided if, as we propose, the allowance is drawn only while the signallers are actually employed on the work for which special qualification is required. If a signaller knows that his retention of the allowance depends on his doing his best, because failure to work well will entail his removal from the special work and the appointment of another man, he will duly exert himself; but to grant the allowance independently of the work is to offer a temptation to relax effort. It follows that not more than one allowance should be drawn by any one man or the number of allowances will exceed the number of opportunities for doing the special work, which ought always to accord exactly with actual requirements. Nor should any man who draws a Telegraph Master's allowance draw a special allowance simultaneously. By his promotion to Telegraph Master he is rewarded for qualifications of another kind. If the scheme of allowances is limited as we propose, we believe that the improvement in efficiency will be such as to far more than outweigh the extra cost involved.

(ii) It would be impossible to lay down for all time the qualifications for which special allowances should be given, but we think that for the present they may be confined to Baudot working (if other automatic instruments, *e.g.*, the Murray, are brought into regular use, the question should be considered whether similar allowances should be granted to men competent to work them), receiving on the typewriter from the sounder and testing. In each case the allowance should be Rs. 10 per mensem. A possible exception to this rule may occur in the case of typewriting if it is found that men are willing to buy their own typewriters. Should this happen, an addition might be made to the allowance sufficient to cover by instalments the cost of the typewriter and the cost of keeping it in repair. The system of individual ownership has certain obvious advantages, but we are unable to say whether the men would be willing to agree to it. The grant of any additional allowance to men owning typewriters and the amount of it, will be points for the Department to consider when typewriting has become well established.

(iii) An allowance of Rs. 10 per mensem, known as the International allowance is at present drawn by signallers employed on the International lines between Madras and Bombay. We consider that no International allowance should be drawn by any signaller in receipt of one of the proposed special allowances. Owing to the use of Baudot and the typewriters on the International lines the effect will be that the International allowances will gradually be absorbed as the men selected for these lines will in time qualify in Baudot and typewriting. As we have pointed out, the number of the allowances will be automatically regulated in accordance with the actual requirements of the Department; but as a further precaution against any undue expenditure, induced by too liberal a view of actual needs, we think that for the present the total (including the International allowances) may be limited to two hundred.

Conditions of
promotion to the
highest class.

57. We propose that except in the case of men recommended for promotion to Telegraph Masters no signaller shall be promoted to the highest class of signallers in which the new increments up to twenty years' service will be drawn, unless he possesses some special qualification for which he receives an allowance when he is actually doing the special work. A treble limitation is thus imposed on promotion to the class which replaces the present Superior Grade, *vis.*: (1) the number in the class is limited to ten per cent. of the Signalling

Establishment; (2) no signaller is eligible unless his service is thoroughly approved; and (3) unless he possesses a special qualification† or is recommended for promotion to Telegraph Master. The mere fact that a signaller draws an International allowance will not of itself be accepted as a qualification for promotion to the highest class. We may point out here that a General Scale signaller drawing Rs. 185 and an allowance of Rs. 10 will receive Rs. 195 while a Local Scale signaller drawing Rs. 120 and an allowance will receive Rs. 130. These amounts are the maxima of the Superior Grade in the General and Local Scales.

Proposal to convert temporary into permanent Telegraph Masters.

58. (i) Signallers are eligible for *permanent* promotion to the rank of Telegraph Master after eighteen years' service or after fifteen years' service including not less than two years' service in the aggregate as officiating or temporary Telegraph Master. The first grade Telegraph Masters receive a consolidated salary of Rs. 275 per mensem, but those in the second and third grades draw their pay as signallers *plus* an allowance of Rs. 50 and Rs. 25 respectively, and temporary Telegraph Masters receive an allowance of Rs. 20. From the first grade Telegraph Masters are selected the Traffic Sub-Assistants, and members of the Signalling establishment are also eligible for promotion to Sub-Assistant Superintendent (General), but our recommendations regarding these classes of officers have already been set forth in Chapter II of this Report.

(ii) The number of Telegraph Masters in each grade stands at present as follows:—

1st Grade	.	.	.	.	.	.	.	.	32
2nd „	.	.	.	.	.	.	.	.	100
3rd „	.	.	.	.	.	.	.	.	160
Temporary	.	.	.	.	.	.	.	.	193

The rates of pay and allowances of each grade were fixed in 1902* and a number of temporary appointments were made permanent. No sufficient reason has been shown for disturbing these arrangements at present so far as the pay of the first grade and the allowances of the other grades are concerned, but the necessity for increasing the number of permanent appointments has again become pressing.

(iii) We have received numerous representations that many of the appointments of temporary Telegraph Masters are really of a permanent nature and that the loss of their allowances when they proceed on leave, involves great hardship on these men, as they may not regain them on return from leave although their juniors may be drawing them. We are satisfied that the existence of so large a number of these temporary appointments constitutes a real grievance of the staff, and we consider that the number of such posts should be limited strictly to correspond with the number of charges that are of a temporary character. On the other hand, there are 24 offices which are in charge of temporary Telegraph Masters who have no signallers to supervise and in our opinion such offices should not be considered to be Telegraph Masters' charges. The officials who hold charge of these offices should be styled Signallers-in-Charge, and should be granted an allowance of Rs. 20, which is the same as is now given to temporary Telegraph Masters. This amount should also be the allowance admissible to Telegraph Masters who are appointed to posts which are strictly temporary. Of the 193 appointments of temporary Telegraph Masters we propose that 169

* *Vide* Resolution of the Government of India in the Public Works Department, No. 848-T.E., dated 22nd July 1902.

† This includes qualification in the Technical Branch—See paragraph 29 (i) *Supra*.

should now be made permanent, 43 being added to the second grade and 126 to the third. The numbers in each of these grades will then be exactly in the proportion of one and two and, as far as possible, this ratio should be adhered to when additional appointments are created in future. The holders of the remaining 24 appointments should be styled Signallers-in-Charge as indicated above. Full details of these proposals are given in Appendix I. This improvement in the grading of Telegraph Masters is reasonable and is the more necessary in view of the recommendation which we are about to make * that future additions to the number of the supervising staff should not depend upon increases to the establishment of signallers, but upon the number of appointments which are actually required to be held by Telegraph Masters.

Qualifications
for promotion
to Telegraph
Master.

59. For promotion to Telegraph Master we propose a double qualification. In the first place no signaller should be promoted unless he has been specially recommended by the Divisional Superintendent with reference to his character, power of control, and general fitness for the appointment. Ordinarily such recommendations should be limited to men of not less than ten years' service. Before appointment as Telegraph Master the selected candidates should be required to pass a practical qualifying examination in technical matters, in traffic, and in departmental rules, the standard being such as to ensure their competency for the duties of a Telegraph Master. The details of the examination should be settled by the Director General of Telegraphs. Appointment to the rank of Telegraph Master should be probationary in the first instance, no officer should be confirmed until he has given sufficient proof of his competence, and a Telegraph Master on probation should be liable to reversion to the rank of signaller, if he does not give such proof within a reasonable time.

Appointment
of Inspecting
Telegraph
Masters and
their duties.

60. (i) Special reference must be made to the class of Inspecting Telegraph Masters of whom there are thirty-three at present in the Department. These men are employed to inspect the instruments and batteries in Railway Telegraph Offices and also occasionally to look after telephone instruments. As a rule they are comparatively junior men, and they draw, in addition to their pay as signallers, Rs. 20 per mensem, the same allowance as that of the temporary Telegraph Masters. The title of Telegraph Master is not really appropriate to the nature of their duties; they are in fact signallers employed on inspection work and the title "Inspecting Signaller" would accurately describe their employment. We do not propose, however, that their designation should be changed. The title of Telegraph Master no doubt gives them greater control over the Railway signallers than they would otherwise possess, and from this point of view is an administrative convenience. The title of Inspecting Signaller would also be somewhat misleading as it is already used for a class of officials of a somewhat lower status, who are occasionally employed on work of a similar character. The Director General of Telegraphs has at present the power to appoint Inspecting Telegraph Masters and grant them the allowance of Rs. 20 provided that the whole of the expenditure on these allowances can be met from the grant of Rs. 13,000 which is placed annually at his disposal †. This power he should continue to possess; but if our proposals are approved, the power need not be limited by the amount of a special grant given for this purpose only: it should be exercised, as in the case of other branches of the establishment, subject to the limits of the grant for fixed permanent establishment. The Director General of Telegraphs should also

* *Vide* paragraph 85 below.

† *Vide* No. 32 in Schedule I of Appendix E.

have power, when he appoints an additional Inspecting Telegraph Master and thus removes a signaller from actual signalling duty, to appoint another signaller in his place.

(ii) Although Inspecting Telegraph Masters are at present employed mainly in the technical inspection of Railway offices, we think their services may very properly be utilised in the inspection of combined offices and in connection with simple works of construction and maintenance. Moreover, we have proposed * that Sub-Assistants (General) should be recruited from this class and it will for this reason and on general grounds of economy be an advantage if the duties of Inspecting Telegraph Masters are in future more varied than has usually been the case in the past. To carry out these additional duties and to meet the general economic development of the country involving an always increasing number of Railway, Canal and combined offices, more men of this class will be required. It is for these reasons that we attach importance to the grant of power to the Director General of Telegraphs to increase the number of Inspecting Telegraph Masters.

Summary of
foregoing
proposals.

61. Our proposals for the reorganisation of the Signalling Establishment may be summarised as follows :—

- (1) The pay of the existing Good Grade to be adopted as the pay of future entrants to the Signalling Establishment for the first sixteen years of their service.
- (2) Signallers of sixteen years' service and under to be divided into three classes in each scale *viz.*, *General Scale* (a) Rs. 50 to Rs. 75, (b) Rs. 82 to Rs. 112, (c) Rs. 122 to Rs. 162, *Local Scale* (a) Rs. 42 to Rs. 57, (b) Rs. 60 to Rs. 75 and (c) Rs. 81 to Rs. 108.
- (3) Promotion from class to class to be given only on approved service, but no limitation to be imposed on the number in each class.
- (4) An additional or highest class of signallers, limited to ten per cent. of the establishment, to be created on Rs. 172 and Rs. 185, (General Scale), and Rs. 114 and Rs. 120 (Local Scale), the first increment being admissible after two years' service on Rs. 162 or Rs. 108, and the second after two years' service on Rs. 172 or Rs. 114.
- (5) Extra allowances of Rs. 10 per month in addition to pay to be given to signallers qualified in Baudot, typewriting, and testing while they are actually employed on such work.
- (6) Promotion to the highest class of signallers to be given only to men who have thoroughly approved service, and who are qualified for a special allowance or are selected for promotion to Telegraph Master.
- (7) Subject to the limit of ten per cent. on the total Signalling Establishment, men at present in the Superior Grade or qualified for it by examination to draw the Superior Grade pay, and the Grade to die out as these men are promoted, retire, or die.
- (8) Men at present in the Good Grade or qualified for it by examination to come on the new scale of pay at once.

* *Vide* paragraph 46 (iii) above.

- (9) Men at present in the Average Grade to come on the new scale of pay if (a) they are permanent Telegraph Masters, (b) they are signallers and pass the signalling test at 23 words a minute, (c) they are signallers of over 20 years' service on the maximum pay, and the condition as to passing the signalling test is relaxed by the Director-General of Telegraphs.
- (10) All future entrants to pass at 23 words a minute before employment.
- (11) One hundred and sixty-nine appointments of temporary Telegraph Masters to be made permanent, 43 being added to the second grade and 126 to the third.
- (12) The remaining 24 temporary Telegraph Masters to be styled Signallers-in-Charge.
- (13) No signaller to be promoted permanently to Telegraph Master unless—
- (a) He has been recommended for promotion by the Divisional Superintendent.
 - (b) He has passed a practical qualifying examination in technical matters and in traffic and departmental rules.
 - (c) He has given proof of his competence for the duties of a Telegraph Master after a reasonable period of appointment on probation.
- (14) The Director-General to have power to appoint Inspecting Telegraph Masters and to appoint additional signallers in their place subject to the limits of the grant for fixed establishment.

Cost of the reorganisation of the Signalling Establishment.

62. (i) It remains now to consider the cost of our proposals for the reorganisation of the Signalling Establishment. The Examiner of Telegraph Accounts in the Statement given in Appendix J of this Report has calculated the ultimate expenditure at Rs. 7,600 a month or Rs. 91,000 a year, but this amount is far below the mark and it is clear that the basis of seventeen years taken by him in framing his estimate of our proposals is unduly favourable to our scheme.

(ii) The cost of the reorganisation will be approximately the sum required to raise the pay of the present Average Grade men to the Good Grade scale, and to increase the number of the second and third grade Telegraph Masters' allowances. The difference between the Average and Good Grade rates is not uniform at all periods of service and it is therefore necessary to take as the basis of the calculation the number of men of each year's service in order to arrive at the actual figures. No figures are available giving this information for the present date, but the analysis of the staff as it stood on the 1st April 1906 which is contained in Appendix I of this Report furnishes data for an approximate estimate of the cost. It will be found that the cost of raising the pay of *all* Average Grade men to the Good Grade would on the 1st April 1906 have involved an extra expenditure of Rs. 23,756 per mensem. This, however, would have been the maximum extra expenditure on the assumption that all the Average Grade men would pass the signalling test at twenty-three words a minute. As regards Telegraph Masters' allowances, there are at present 104 of Rs. 50,* 160 of Rs. 25 and 189 of Rs. 20, costing on the aggregate Rs. 12,980

* Four temporary Telegraph Masters draw Rs. 50 per mensem. See Appendix J.

per mensem. For these we propose 143 allowances of Rs. 50, 286 of Rs. 25 and 24 of Rs. 20, costing on the aggregate Rs. 14,780 per mensem. Roughly, therefore, our proposals may be stated to involve an extra expenditure of Rs. 25,556 per mensem or about Rs. 307,000 per annum in the near future.

(iii) It will be seen that this amount, Rs. 25,556, closely agrees with the difference, Rs. 25,589, between the present monthly cost of the establishment given in the Examiner's Statement in Appendix J and our estimate given in the same Appendix of the cost of the establishment as it will stand after the reorganisation is effected.

(iv) We consider that the cost of the whole scheme may therefore fairly be taken at not more than Rs. 27,500 a month.

63. (i) Having stated our views regarding the classification and pay of signallers we have next to discuss to what extent the earnings of signallers "should be regulated by their actual outturn of work by the general introduction of 'pie-money' or some similar system."

(ii) Before we enter on the subject of pie-money it will be convenient for us to state our views on the more or less connected question of overtime, pie-money and overtime having this in common that both are payments by the piece. The question of overtime has been referred* to us by the Government of India, though it is not expressly mentioned in the Resolution of September last. Rewards for overtime are a remuneration for work done outside the usual hours of duty. Pie-money is a reward for work done within such hours at a speed actually greater than usual or accepted as such. While the conditions upon which rewards may be granted for overtime are simple, the rules needed for the unobjectionable application of a pie-money system are very complex and will presently be stated at length.

Distinction
between pie-
money and
overtime.

Overtime.

64. We have considered the suitability of the existing rules as to overtime and the rates † at which rewards for such work are granted. We understand that when the traffic cannot be disposed of within the usual working hours, volunteers are always called for in the first instance, and, if sufficient volunteers are not forthcoming, the staff are ordered to work overtime in rotation, within a limit of two hours at a time and subject to a maximum of six hours a week. We are of opinion that it is generally undesirable to order overtime, and that it should be restricted to as few occasions as possible. Resort should be had to the system only in cases of emergency, such as the unavoidable absence of a considerable portion of the staff from illness, the necessity of raising the class of an office temporarily without addition to the staff, or the congestion of traffic due either to the interruption of one or more of its ordinary outlets or to a sudden influx of messages. We believe that, if the methods of supervision are improved in the manner which we shall recommend,‡ it will be unnecessary to ask the staff to work outside the ordinary hours except on such occasions as those just described. The rates at which rewards are given for work done after the expiry of the usual watches were fixed very recently by the Government of India, and we do not see sufficient reason to suggest their alteration, especially in view of our recommendation that overtime should be discouraged as much as possible.

* Memorandum of the Government of India in the Department of Commerce and Industry, No. 8011—88 (T. E.), dated the 10th October 1906.

† *Vide* letter No. 1200—137, dated 13th February 1907, from the Secretary to the Government of India in the Department of Commerce and Industry.

‡ *Vide* paragraph 140 below.

History of the pie-money system.

65. The pie-money system has a history which of late years has been voluminous. The system was tried in the Department many years ago, but we do not know the reasons for its discontinuance. It was revived as an experiment in April 1904 on the basis of one pie for every message in excess of 1,500 a month. This standard of $6\frac{1}{2}$ messages per hour was quite inadequate; and in proposing to raise it to the present standard of 80 messages per day and to adopt the present rate of 2 pies for every message in excess of this minimum, the Director-General of Telegraphs admitted that in calculating the rate he had arrived at an average extra emolument of Rs. 10 per mensem. The grant of pie-money has not been sanctioned permanently, but a further trial of this method of encouraging an increase in outturn was authorised in November 1905 until the 1st April 1906; and this sanction has been subsequently extended, the latest order* being that the pie-money system may be continued in those offices where it is in force for a further maximum period of one year with effect from the 1st October 1906.

Objections to the system.

66. In the course of the recent correspondence certain objections were raised which may be thus summarised:—

- (1) The messages transmitted on the pie-money lines are more inaccurate than others.
- (2) There was at first a tendency to crowd most of the traffic on pie-money wires, other wires which might have been utilised remaining comparatively idle.
- (3) It had not been proved that the introduction of pie-money had led to—
 - (a) the expedition of traffic, or
 - (b) economy in establishment charges, or
 - (c) a reduction in the rate of expansion of the Capital expenditure of the Department.

Other objections deserving notice were urged by the deputations of signallers and various officers of the Department. It was alleged that the system tempted men to seriously overwork themselves and that this over-exertion caused the development of signallers' cramp.

Inaccuracy of messages.

67. (i) Taking these objections in order, it appears to be the fact that the pie-money messages at first contained a higher percentage of mutilations than others. Measures were adopted to correct this defect; and to quote the latest figures supplied by the Director-General of Telegraphs,† "the errors detected in pie-money messages are shewn to have been 0·84 per cent. as against 0·86 in non-pie-money messages—a slight difference in favour of the former." This result was attained only after punishing the signallers who had made most mistakes by removing them from pie-money lines. Eagerness to earn additional remuneration by rapid work no doubt constitutes a temptation to inaccuracy; but with practice in very rapid transmission it is likely that greater accuracy will be obtained. Still to safeguard the public against any unusual proportion of errors in pie-money messages it seems essential that—

- (i) *no signallers should be employed on pie-money lines unless they have passed the Code and Figure test;*

* Government of India, Department of Commerce and Industry, No. 7728—7729, dated 29th September 1906.

† Paragraph 13 of Director-General of Telegraphs' No. 331-G., dated 29th November 1906.

(ii) precautions should be taken to ensure that accuracy shall not be sacrificed to speed. One method which should be adopted for this purpose would be to periodically subject the pie-money messages on different lines to a special test as regards accuracy, the results of the scrutiny being communicated to the Superintendent through the Circle Officer; and

(iii) the Superintendent should be allowed a very wide discretion in dealing with signallers who commit inaccuracies on pie-money lines.

(ii) With regard to condition (i), accuracy may be expected if only really good signallers are employed on pie-money lines. It has been objected that possibly very few men would become accustomed to specially rapid work, whilst some of the rest would degenerate or fail to improve; but this objection may be met by giving the men turns of pie-money work in rotation subject to the proviso, which should be very strictly enforced, that none but really competent signallers should be so employed.

(iii) If it is admitted that these conditions are necessary, it must be admitted also that the need for taking these special precautions to ensure the accuracy of pie-money work constitutes a somewhat grave objection to the system and is perhaps of itself a sufficient reason against adopting throughout the Department any general system of payment by the piece as part of the usual remuneration of signallers. There are other strong objections to piece-work to which reference will be made below.

The crowding of traffic on pie-money lines.

68. As to objection (2) in paragraph 66 above, this may be met by efficient supervision. Superintendents were at first instructed to distribute traffic equally on all available wires, but it was at once pointed out that it is not possible to distribute traffic evenly for the simple reason that it does not arrive evenly; and a direction to Superintendents to work the circuits to the best advantage was approved by the Government of India. It seems, however, advisable to lay down as the fourth and fifth conditions of the grant of pie-money that—

(iv) *When pie-money is granted on a wire between any two places, it should be simultaneously granted on all direct outlets between such places, if there are more than one; and*

(v) *no diversion of traffic should be allowed to take place for the purpose of making pie-money admissible.*

Pie-money expedites traffic.

69. With regard to objection 3(a), there is now ample statistical information to show that, as a fact, the grant of pie-money does expedite traffic. But apart from all statistics, the evidence which we have collected on four places this point beyond doubt. We think, however, that it is necessary to propose as a sixth condition applicable to pie-money that—

(vi) *when pie-money is to be granted at one end of a circuit, it should be simultaneously granted at the other end.*

It is obviously useless to expedite transmission if the receiver cannot keep pace with the transmitter.

Pie-money cannot lead to any immediate reduction of establishment.

70. If pie-money as a permanent system is restricted, as we propose below, to main circuits and through lines, no considerable or immediate effect on establishment charges is to be anticipated. Establishment cannot be varied with the fluctuations in traffic that make the grant of pie-money desirable.

We believe that pie-money will conduce to economy because it gets more work out of the existing establishment within the usual hours of duty, and will thus diminish the increase of establishment which is inevitable as traffic grows. Certainly pie-money could not be recommended as a means of reducing existing establishment. Such a reduction would in any case be imprudent in view of the increase of traffic. Meanwhile, until the ultimate effect of the system can become apparent, it may be observed that the expenditure on pie-money bears a very minute proportion to the total expenditure of the Department. The largest expenditure on pie-money in any month has been Rs. 2,415, the total cost of the establishment being Rs. 1,63,960 per mensem; the percentage of pie-money to total cost was thus 1.5 only.* The reply, then, to the objection here under consideration is that if pie-money cannot lead to any immediate reduction of establishment, at any rate it obviates to some extent the reinforcement of establishments by transfers when a sudden rush of traffic occurs; it does not cost much; and will—we think we may say certainly—reduce additional expenditure in the long run.

Pie-money is likely to reduce capital expenditure.

71. Adverting to objection (3) (c), we believe there will be eventual economy in Capital expenditure as well as in establishment. If more work is done on existing circuits, the erection of additional wires need not proceed with the same rapidity. The Director-General of Telegraphs has stated † “that in preparing the forecast of extra wires likely to be required in 1907-08 between existing departmental offices, it was found possible to restrict the provision of additional main outlets on the assumption that the pie-money system would continue on the existing circuits.”

Pie-money and overwork.

72. During the course of our tours not a single instance that we can recall has been proved of signaller's cramp having been directly caused by working on a pie-money line. Generally speaking the men may be trusted not to overwork themselves; nevertheless overwork should be deliberately prevented by a judicious rotation of signallers, and it should be a seventh condition in the rules for pie-money that—

(vii) *No signaller shall be required to work overtime on any day during which he has earned pie-money.*

A system of payment by results is not suitable for the Telegraph Department.

73. Any system by which numerous temporary hands would be induced by a bonus to work to their utmost capacity only to be discarded or invalidated when their capacity failed would, we think, be cruel, unnecessary and unjustifiable. It is true that a bonus system for the whole body of signallers need not necessarily dispense with a minimum living wage or with pensions or with precautions against over-work. But against such a general system, in addition to the reason already given, *viz.*, that special precautions would be necessary to prevent inaccuracy, it may also be said that a bonus system is fair and practicable only where the possible outturn depends on the exertions of the persons working; and this condition cannot be fulfilled in the Telegraph Department where the possible outturn varies enormously with the line and the office. Such a system would involve numerous different rates for different offices and for different lines in the same offices and would thus lead to endless complications. It would also be most unsuitable to the conditions of life of signallers of European descent, stability of prospects being essential to induce a desirable class of men to serve. It would be a grave scandal if such men were

* Director-General of Telegraphs' No. 331G., dated 29th November 1906, paragraph 4.

† *Ibid.*, paragraph 11.

invalidated with any frequency as a consequence of over-work; and even if that danger be deemed negligible, great discontent would arise if they found that they were paid less on a diminished outturn as their age and their expenses increased. Nor would it be either fair or politic to impose a bonus system upon Indian signallers, if it could not be applied to signallers of a different descent.

Reasons for recommending the pie-money system.

74. (i) Having thus reviewed the objections to the pie-money system and explained how it is that no system of payment by results is suitable for the Signalling Establishment as a body, we are prepared to recommend the continuance of pie-money, subject to the conditions above set forth, not because it will diminish expenditure on establishment or Capital outlay, though we believe that both of these results will to some extent be secured, but as a means of expediting traffic and of inducing competent signallers to do their best. The present minimum of 80 messages is, however, much too low for the system as a permanent one, and should be very considerably raised. There is abundant evidence to the effect that on a well-fed main line 150 messages a day is by no means an excessive outturn to expect from a signaller, and, as we shall presently explain, this is substantially, though not exactly, the same thing as 20 messages an hour. A man should not get extra pay for merely doing his work with ordinary industry. The proper remedy for short work is more effective supervision; and our object is to adopt the pie-money system as a supplement to, not as a substitute for supervision. One step towards more effective supervision is to relieve Telegraph Masters, as much as possible, of clerical duties—a measure elsewhere * proposed.

(ii) We are further opposed to the grant of pie-money merely as a means of increasing the signaller's pay. The proper remedy in that behalf is dealt with in the former part of this Chapter. Elsewhere too, † we recommend rewards for special acts of courage or for specially meritorious conduct on particular occasions. Here we propose a permanent system of pie-money as a means of granting rewards for specially good work of the ordinary kind performed within the usual hours of duty. We shall advise the abolition of Check Office fines; and we think it reasonable to recognise, by the grant of pie-money, the principle that the hope of reward may induce men to do their best no less than the fear of punishment. We made frequent inquiries as to whether any practicable proposal could be advanced for granting rewards for a good outturn; but no suggestions were forthcoming for any new plan which we could recommend. We think therefore that the system which may properly be utilised in this behalf is that of pie-money.

Criterion for sanctioning the permanent application of pie-money.

75. Taking pie-money, then, as a permanent system of rewards for a good outturn offered with the object of expediting traffic, the first question is where and under what conditions of traffic is pie-money to be allowed. The Director-General of Telegraphs has proposed to extend the grant of pie-money to all offices dealing with over 50,000 messages per month. ‡ This proposal has not been sanctioned; nor do we think it should be. The basis of the system, considered as a permanent part of the organisation of the Department, should be not the office—where in all cases there would be side-lines upon which pie-money could not be earned—but the circuit. As a fact, the system is at present worked by the selection of circuits, and this is quite right because it is ordinarily

* *Vide* paragraph 140 below.

† *Vide* paragraph 163 (vii) below.

‡ Director-General of Telegraphs' No. 143-T, dated 31st July 1906.

applicable only to a main or through line where the influx of the traffic is normally such that the number of messages will supply the means of earning it. Adopting the circuit as the basis, our proposal is that the test for applying pie-money to a circuit should be that (after omitting Sundays and holidays) the total traffic of the circuit should not be less than an average outturn per man per watch, for men working simplex of 120 messages and for men working duplex of 100 messages. This distinction is necessary because when lines are worked duplex the outturn of each individual signaller is less, two being employed at each end of the wire, though the total number of messages put through is greater. Eliminating duplex working, our proposal fixes the standard at 360 messages per day per circuit, the day, of course, including the three watches. At 20 messages per hour the figure would be 480 messages. But allowance must be made for Sundays and holidays, for the fact, already noted, that traffic does not arrive evenly either throughout the twenty-four hours or from day to day or week to week, and for the consequence that the figure of 480 would imply an average influx of 20 messages per hour on the wire throughout the year which does not in fact occur. On the whole, we have no hesitation in recommending a standard of 360 messages as the criterion for determining whether pie-money should be permanently applied to a line worked simplex. The modification indicated above would be necessary in the case of a duplex line.

Criterion for determining when pie-money may be earned by the signaller.

76. The minimum outturn on attaining which the signaller may begin to earn pie-money must be settled on different considerations. When the depositions of signallers told us, as they often did, that 150 messages was a fair day's work, we are satisfied that they had in their minds the standard of 20 messages an hour. The watches are of 8 and 5 hours' duration between 8 and 21 hours, the night watch running from 21 to 8 hours. The average duration of the three watches is 8 hours, and at 20 messages an hour the outturn would be 160 messages per watch. This would be a good deal beyond the mark because allowance must be made for reliefs for meals and short spells of rest, so that seven hours would be about the time in an 8 hours' watch that a signaller would be actually working at his instrument. In a 5 hours' watch an outturn of 150 or even of 140 messages could not be attained. Whether such outturn would be possible during the long night watch would entirely depend upon the influx of traffic. Taking one watch with another 150 messages a day might be expected as an average. Thus we have thought it fair to adopt the standard of 20 messages an hour and to apply it to an 8 hours' watch with the reduction of one hour as already explained. We have therefore come to the conclusion that 140 messages may be accepted as a fair day's work in an 8 hours' watch, and we have adopted this as the outturn to be attained before pie-money may be earned. We are fully satisfied that this standard is quite high enough if pie-money is to be earned at all; and we think that opportunities of earning it should be afforded to induce signallers to do their utmost.

Pie-money will rarely be earned except in one watch.

77. A very important effect of our proposals is that pie-money will rarely, if ever, be earned except in the first watch from 8 hours to 16 hours. In the short 5 hours' watch there will not be time to earn it, but we think that for a spell of work of that duration a signaller may fairly be expected to do his best without extra pay. In the long night watch pie-money may sometimes be earned but, as we have already said, this entirely depends on the volume of traffic.

Pie-money should not be granted by the hour.

78. We do not think it at all expedient to grant pie-money per hour which is the latest proposal of the Director-General of Telegraphs. The acceptance of the record of each hour's work would involve a great deal of trouble, and there is the more important objection that the signaller might find it to his interest to delay work in order that he might heap it on to the next hour or two and so earn pie-money.

Proposed rate of pie-money per message.

79. Pie-money being granted on the proposed conditions as a normal system of reward and being limited to pie-money lines, fixed as such by the Director-General of Telegraphs, we think the reward should be substantial. This is necessary because we raise the minimum from 80 messages to 140 and unless a sufficient inducement is held out to work up to the new standard, it is probable that signallers will not think it worth their while to do their best and the pie-money system will die out because the men themselves will not take advantage of it. Accordingly we would double the present rate of remuneration and after the minimum of 140 messages has been attained allow the signaller four pies per message. It must be remembered that although good supervision may be expected to exact a fair day's work, it is extremely difficult for it to do more. For extra exertion there must be sufficient inducement, and when a higher standard is prescribed, the inducement to go beyond it must be considerable if it is to be effectual. We propose no change in the present limit of 32 words as applied to all long messages when calculating the number for pie-money earnings.

Grant of pie-money temporarily to meet rushes of traffic.

80. So far we have been dealing with the case of main lines where a full volume of traffic is continuous. But sudden rushes of traffic may occur on many other lines, as, for instance, at a time of opium speculation. To meet such cases we would apply the same principles with an important difference which is that we would raise the pie-money qualification of the line from 120 to 180 messages per watch. We would not admit that a sudden rush of traffic occurs unless this number of messages is received for transmission; and our reason for this criterion is that we do not think men should receive any extra remuneration for casual additions to their work when the additional work is not excessive. We propose, then, that, when such a sudden rush of traffic occurs that the number of messages to be disposed of over any non-pie-money wire exceeds 180 messages in any watch, pie-money may be given temporarily at the discretion of the Superintendent for the number done by any one signaller in excess of 140 messages per watch. This rule should apply to all offices and all non-pie-money wires wherever a rush of traffic, as above defined, may occur. In this connection it is necessary to provide that the Superintendent who orders pie-money at one end of the wire should, when the other end of the wire is in another Division, inform the Superintendent at that end so that he may give the same order.

The Director-General should have authority to revise the list of pie-money lines.

81. When an order has been passed that any line shall be deemed to be a permanent pie-money line, pie-money may be earned upon it at any time when the rules as to outturn are satisfied. But if the traffic on such a line permanently falls below the standard which we have proposed, the Director-General of Telegraphs should order that it shall no longer be classed as a pie-money line. The system thus involves discretion to the Director-General of Telegraphs to revise on his own authority the list of pie-money lines according to the proposed standard.

Intermediate arrangements pending the introduction of the new system.

82. The present arrangements having been sanctioned only till the first of October next it is necessary for us to make some recommendation as to the course which should be adopted before our proposals, if approved, can take effect.

During this interval we would leave the present minimum of 80 messages and the present rate of two pies per message unaltered. But we think the Director-General of Telegraphs might be empowered to order those lines to be pie-money lines where the average influx of traffic reaches the amount that we have defined. The new minimum of 140 messages and the new remuneration of four pies per message should be brought into operation simultaneously with the increase in the emoluments of the signallers proposed in this Chapter.

Summary of the pie-money proposals.

83. The proposals on the present subject are detailed and rather intricate and it will be convenient to summarise them here. They are as follows :—

- (1) Until the date upon which the revision of the pay of the Signalling Establishment takes effect, pie-money should be granted at the existing rate of two pies for every message in excess of 80 disposed of in one watch by each signaller.
- (2) From that date the rate should be four pies a message in excess of 140 per watch and the system thus fixed should be retained permanently.
- (3) Pie-money should be granted on the basis of circuits, not of offices.
- (4) The criterion for determining whether pie-money should be permanently applied to a new line should from now be an average of 360 messages a day in the case of lines worked simplex, an addition of $12\frac{1}{2}$ messages per hour being made for a line worked duplex.

Note.—No change in these figures will be necessary when the new scale proposed in (2) is adopted.

- (5) The test for applying pie-money temporarily to a line should be the receipt of 180 messages in one watch for a simplex line and of 180 *plus* 150 messages or 330 in all for a duplex line.

The note to (4) applies in this case also.

- (6) The Director-General should be authorised to declare a line a pie-money line or *vice versa*, on the basis of (4) without reference to Government.
- (7) The Superintendent should be authorised of his own motion to order pie-money to be applied to a line when the conditions mentioned in (5) are fulfilled; and when he has given such an order he should at once inform the Superintendent who controls the office at the other end of the wire whereupon the latter should also order pie-money on the line temporarily.

These proposals are all subject to the conditions (i) to (vii) described above.

None of these proposals apply to lines worked by Baudot instruments. The experience so far gained of the disposal of traffic on such lines is, in our opinion, not sufficient to justify any recommendations as to the manner in which the pie-money system might be applied to them.

Automatic increase of the Signalling Establishment.

84. (i) We have been asked in paragraph 14 (10) of the Resolution to consider—

Whether a scheme can be devised for the automatic increase of the signalling establishment in proportion to the actual increase in traffic, the strength of the controlling establishment being increased in fixed proportion to the increase in the lower grades.

(ii) We are of opinion that it is possible to devise an automatic scale for increasing the strength of the Signalling Establishment in proportion to the increase in traffic. From a statement of traffic statistics of departmental offices for 1905-1906 supplied to us by the Director-General of Telegraphs, it appears that the average number of signalling operations dealt with by a signaller of the Agra, Bombay and Madras offices in that year was 17,929, 17,198 and 17,494 respectively, and on page 20 of letter No. 143-T., dated 31st July 1906, from the Director-General of Telegraphs to the Secretary to the Government of India in the Department of Commerce and Industry, it is shown that the average outturn of each signaller of the Department varied from 12,578 to 14,990 operations a year during the ten years ending with 1905. From these figures it is evident that the average outturn of a departmental signaller does not vary greatly from year to year or from one large office to another.

(iii) We consider that the simplest and most accurate method of ascertaining approximately what additions should be made to the signalling establishment of the whole Department is to proceed solely on the basis of the increase in signalling operations that has taken place since the last revision when presumably an adequate staff was provided for the total traffic to be dealt with at that time. Taking the period from 1900 to 1905, the years when the average outturn reached the highest points during the decade, we find that the growth of traffic was met by an increase of signallers which works out at the rate of one additional man for 16,520 operations in a year, but we propose the adoption of a much higher standard to justify future increases. Though the low average outturn of a departmental signaller in this country is partly due to the large number of minor circuits with light traffic which must be attended to, the delays in calling up offices on such circuits, the faulty supervision of signal offices, the large proportion of signallers who have to take their turn of duty at night when traffic is intermittent and the slow working of postal and railway signallers, we are satisfied that it is capable of much improvement; and we recommend that additional signalling establishment should for the present be sanctioned on the scale of one new appointment for every increase of not less than 25,000 operations. This standard is very nearly equivalent to an outturn of 80 messages per signaller on each day if, excluding Sundays and holidays, the year be taken at 310 days. The improvement which we expect in the supervision of departmental offices and the class of men recruited owing to better rates of pay, the extended use of the Baudot and other improved telegraph instruments and of the typewriter for receiving, the higher professional qualifications which we have recommended for departmental and postal signallers, the close and constant examination of the traffic arrangements, and a stricter control over combined offices will all contribute to ensure a higher average outturn from departmental signallers. We consider therefore that as traffic increases and these improvements are adopted, the figure proposed should be steadily raised. The experience of a few years during which the greatest attention is paid to traffic and supervision will show what minimum average outturn can fairly be required from the signallers of the Department.

(iv) In fixing the standard at 25,000 operations to begin with we have allowed for the grant of leave to the additional establishment sanctioned, and we have given due consideration to the circumstances that great difficulty has been experienced under existing conditions in granting leave to the signalling

He should also be authorised in the case of offices where there is only one signaller to sanction a charge allowance of Rs. 20 per mensem for the signaller in charge.

(iv) New appointments made under these proposals should not necessarily be additions to the lowest grade of Telegraph Masters, but should be added in turn to the second and third grades, as recommended above, so as to preserve, as nearly as possible, the same proportion of one to two in these grades.

(v) We also recommend that the Director-General of Telegraphs should be given power to sanction additional temporary appointments of Telegraph Masters for purely temporary offices for a period not exceeding six months. As examples of the cases here contemplated, we may mention temporary offices opened for manoeuvres, or in connection either with the tours of His Excellency the Viceroy or with the visits of distinguished persons to India.

Recruitment of the Signalling Establishment, General scale, from the Lawrence Asylums.

86. (i) There are certain other matters which are intimately connected with the subject of this Chapter because they bear directly on the improved efficiency and greater contentment of the Signalling Establishment, that is to say on the main objects of the reorganisation. The matters we refer to are discussed in the following paragraphs and the first of them is the recruitment of the signallers of the General Scale.

(ii) We propose in another part* of this Report that the Local Scale should be recruited mainly from amongst the Postal signallers. Dealing with the General Scale we observe that at present the best recruits for this Scale are obtained from the Ootacamund and Sanawar Lawrence Asylums.

(iii) At Ootacamund the Asylum has its own instructor (usually a retired Sub-Assistant Superintendent or Telegraph Master) and the Telegraph Department contributes to the Asylum Rs. 70 towards the education of each boy who passes out. The instructor gets from the Asylum a salary of Rs. 100 per mensem, *plus* a premium of Rs. 15 for each boy admitted as a signaller into the Department. He receives free quarters and is regarded as a member of the Asylum Staff. At Sanawar the instructor is a signaller of the Telegraph Department who receives an honorarium of Rs. 15 from the Department for each successful boy, but no contribution is paid to the Institution itself. This signaller is paid by the Asylum up to Rs. 100; and the difference between that sum and his regular departmental pay,—if the latter exceeds Rs. 100,—is paid by the Department. In both cases the class is conducted in the school itself, the period of training extending over one year. At the end of the year the pupils are examined by an officer of the Telegraph Department, but the number who can be admitted into the Department in any one year from each Asylum is limited to twelve. Both Institutions are supplied with instruments and stores free of charge.

Proposal to extend recruitment to other European Schools.

87. (i) In paragraph 52 (iii) we expressed our intention of referring to recruitment from European Schools and we now proceed to remark on this subject in more detail.

(ii) The Director-General of Telegraphs at his conference with the Committee at Calcutta regarding the reorganisation of the Signalling Establishment† proposed that the system just described as in force at the Lawrence Asylums

* *Vide* paragraph 104 below.

† *Vide* Proceedings Part VIII, pages 2 and 7-8.

should be extended to other educational institutions in India and Burma. To enable us to form an opinion on this suggestion we addressed a Circular through Directors of Public Instruction, to various Colleges and Schools ; and this, with the replies received, is printed in Appendix K. The perusal of these papers is invited. The replies from the Colleges and Schools indicate that the proposal of Sir Sydney Hutchinson is feasible and that many schools will sufficiently welcome it. We think it is most expedient to widen the field of recruitment in the manner suggested and advise that the proposal be accepted, and acted on. Most of the schools favouring the proposal stipulate that the extra expense should be borne or at least shared by Government. This seems to be reasonable. At any institution which agreed to open a telegraph class the detailed arrangements would be settled by the Director-General of Telegraphs after consultation with the Principal or Head Master and with the aid of the Circle Officer, to whom the Director-General of Telegraphs would probably entrust the negotiations and who, on their conclusion, would be in a position to submit a scheme.

(iii) The replies, however, are not uniformly favourable. Some of them state forcibly the objections and difficulties which beset the extension of recruitment. We would call special attention to the letters received (1) from the Lawrence Military Asylum, Sanawar (where there has long been a telegraph class, a circumstance which makes the opinion of the Principal particularly valuable), and (2) from the Scottish Educational Society's High Schools, Bombay. These and other papers setting forth the reasons why service in the Telegraph Department does not attract a satisfactory class of recruits afford, as we have already mentioned, strong support to our recommendations for raising the initial pay and improving the prospects of the signalling establishment, the proposals to widen the field of recruitment and to increase the pay being mutually dependent on each other. Unless the rates of pay are raised the attempt to recruit a better class of men from the European schools will certainly prove a failure.

(iv) When classes similar to those at Ootacamund and Sanawar are or are about to be opened some forecast will be required of the probable number of recruits which should annually be provided from the Province in which the school is situated ; so that the number of classes and pupils may be adjusted to actual needs. Such forecasts would be framed by the Director-General of Telegraphs and communicated by him to the Circle Officer for his guidance both in devising the original arrangements and in settling from time to time the number of lads who should be trained at the several school classes in the Province.

training
Classes.

88. Better arrangements should, we think, be made not only for the recruitment of signallers but also for their training. We are not satisfied that the training classes for instructing signallers are adequately equipped, that the accommodation provided for them is sufficient or suitable, or that the training is as efficient as existing circumstances demand. More instruments, especially tape recorders, are required for practice, and in as many cases as possible typewriters should form part of the equipment of the class, so that departmental probationers who desire to learn typewriting may have the opportunity of doing so. Great stress should be laid on the acquisition of a clear and legible handwriting, and copy books should be used as part of the ordinary course where this has not already been arranged. Special care should be devoted to instruction in Code and Figure signalling. The importance of

good handwriting is a matter which demands particular attention in the case of postal signallers who are often deficient in this respect, but throughout we consider that postal signallers should receive the same care and attention while under training as departmental men. The instructors should usually be Telegraph Masters and should always be specially selected. The extra allowances given to signallers who are appointed as instructors should be sufficient to attract really suitable men, and the present practice by which the allowances cease when the class falls below a certain number should be discontinued. It is obvious that the instructor should have no inducement to keep back probationers who are ready to pass. Examinations of probationers should be conducted by an officer superior in rank to the instructor, and the higher Telegraph Officers should devote much attention to the training classes to ensure that the course of instruction is thorough, that the probationers are not in excess of the number that can be trained by one instructor and at one time, and that the accommodation provided is sufficient.

Qualifying and annual tests for signallers.

89. (i) When we discussed the reorganisation of the signalling establishment with the Director-General of Telegraphs at Calcutta, he proposed * that the period of training for departmental signallers should be extended to twelve months, and that the rate of signalling at which they qualify should be raised from twenty words a minute to twenty-five. We agree with Sir Sydney Hutchinson that the period of training should be extended as proposed and that the existing standard should be raised. After very careful consideration, however, we have come to the conclusion that the twenty-five word standard is unnecessarily high. In the United Kingdom, where the traffic as a whole is disposed of at a rate unknown in India, the telegraphists are employed in the Department when they have passed at twenty words a minute, though they have to qualify by a higher standard later. Another point which must not be forgotten is that the long main circuits in this country do not usually admit of the most expert signaller maintaining a speed of over twenty words a minute. We believe that a standard of twenty-three words a minute in plain language will be found to be sufficient; and we are fortified in this conclusion by the opinion of Mr. Berrington, whose first hand knowledge of English conditions gives his advice a special value. It should be added that, owing to the deductions made for errors in the qualifying test, a signaller, to pass at twenty-three words a minute, must generally be able to maintain an average rate of not less than twenty-five words.

(ii) In the case of the Code and Figure test no change is recommended in the existing standard of twenty words a minute which we consider to be sufficiently severe. In this case accuracy is of supreme importance, and any change which might lead to the sacrifice of accuracy to speed is to be deprecated. We understand that it is far easier to send such messages than to receive them, and that when a fast sender has to signal Code words and figures, he must reduce his speed so that they may be received accurately by the receiving signaller.

(iii) In the case of postal signallers also we recommend that the standard of qualification should be raised. Reference is made in paragraph 99 to the necessity of effecting an improvement in this class of operators, and it is unnecessary to labour the point here. We look forward to the ultimate adoption everywhere of a twenty words a minute standard for postal signallers.

* Part VIII. Volume II of the Proceedings, pages 2 and 3.

but in view of the fact that there are parts of the country, such as Assam and Burma, where it is difficult to obtain recruits who can qualify by the existing standard of sixteen words, the immediate introduction of a rate of twenty words a minute everywhere is impracticable. It is therefore recommended that the standard for postal signallers in plain language should be raised to twenty words, but that it should be left to the discretion of the Director-General of the Post Office, to reduce the rate to nineteen or eighteen words in localities where the higher standard cannot ordinarily be attained.

(iv) As regards the Code and Figure test we consider that it will be sufficient if postal signallers qualify at sixteen words a minute, but the test should be compulsory on all future entrants. Owing to the growth of commerce throughout India, the number of Code and cipher message, which have to be dealt with by postal signallers, is already considerable and will certainly increase as time goes on. It is therefore advisable that they should be trained to dispose of such messages, and this training will undoubtedly have a most beneficial effect on their work generally.

(v) Under existing rules all signallers and Telegraph Masters have to pass an annual test in signalling, and cannot receive their increments until they have done so. We have made most careful inquiries into this matter during the course of our tours, and we are satisfied that the universal imposition of the test is quite unnecessary, that it frequently operates unjustly and that it causes the waste of much valuable time. There is much evidence to show that the actual work of an operator is sufficient to keep him up to the mark in signalling, and that owing to nervousness really good signallers often fail in the test. This we believe to be the case. Another element of unfairness in the system is due to the fact that in some offices the examination is more rigorously conducted than in others, where, owing to the pressure of work, the test has sometimes been allowed to degenerate into a pure formality. The examination of Telegraph Masters, who, in the majority of cases, have no further increment to receive and whose duties do not require them to signal at a high continuous speed, is clearly unnecessary; and that of a signaller who has been working on a pie-money line and may, for days together, have been disposing of a daily average of a hundred and fifty messages or more, is equally unreasonable. When it is remembered that the whole Signalling Establishment now numbers nearly three thousand men, the waste of time involved in examining annually such a number, most of whom are known to be perfectly competent, will be obvious. We therefore recommend that, except in the first two years of service, the annual examination in signalling should be abolished.

(vi) The reasons for the exception require explanation. It has been represented that during the early years of service the test may serve a useful purpose by preventing signallers from falling into bad methods of operating such as exaggerations. We are doubtful whether much weight should be attached to this argument. If, as we propose, the period of training is extended, and all candidates pass at twenty-three words a minute, the danger of acquiring bad habits of signalling will be diminished. It is, moreover, the duty of the supervising Telegraph Master to keep a constant watch over the operators, especially the younger men, and to detect and check all errors and faults in signalling. We recognise, however, that many signallers enter the Department as mere lads, and that in their case the knowledge that they will be examined annually for some time may have a good effect. Accordingly

to meet this case we think that the annual examination should be retained for the first two years after a signaller enters the Department.

(vii) It must be clearly understood, as an essential part of our proposals, that it is left to the discretion of the Superintendent at any time to order the special examination of a signaller whatever his length of service. It will be the duty of the Telegraph Master to report to the Superintendent any men who through slackness fall into a bad habit or slovenly style of signalling, in order that they may be examined and their increments stopped until they have acquitted themselves satisfactorily.

Qualifying
test for
Military
Telegraphists.

90. The reasons for requiring a high standard of signalling from Postal probationers apply with even greater force in the case of Military Telegraphists who constitute a large proportion of the Signalling Establishment in the Department, especially in the Punjab and North-West Frontier Province, and work in direct communication with expert Departmental signallers at large trade centres such as Karachi, Amritsar and Delhi. We have received evidence that the work of Military Telegraphists is on the whole wanting in speed and accuracy, while the steady growth of traffic necessitates the employment of only skilled operators on the main circuits. We therefore consider that Military Telegraphists should in future be required to qualify by the twenty word standard before they are employed in the Telegraph Department, and that so long as they do not exceed their authorised period of training, they should be encouraged to remain in the training class until they pass by the Code and Figure test also. For this purpose the period of training might be fixed at nine months and followed by a probationary course of three months in a Departmental office. The Military Telegraphists already employed in the Telegraph Department who have qualified by the sixteen word standard should be given a reasonable time to pass by the twenty word standard and to qualify in the Code and Figure test, and those who fail should be remanded to their regiments and their places filled by other Military Telegraphists who have qualified by the new standard.

Transfers.

91. (i) The question of transfers was referred to us by the Government of India in February last,* and it has also been brought to our notice by nearly every deputation of the Signalling Establishment which has appeared before the Committee. The grounds of complaint were that such transfers are unduly frequent, that they cause much pecuniary loss to the officers transferred, particularly in the case of married men with families, and that in such cases the education of their children is interrupted. These complaints appear to us to be well-founded. We have examined the printed departmental orders of the Director-General for six months (May to October 1906) and we find that the transfers ordered in each month were as follows:—

		Telegraph Masters.	Signallers.
May	1906	11	71
June	"	6	67
July	"	8	77
August	"	5	87
September	"	4	66
October	"	16	84
TOTAL		50	452

It will be seen that on the average more than eight Telegraph Masters and seventy-five signallers were transferred every month, and that the number of

* Vide Memorandum from the Government of India in the Department of Commerce and Industry, No. 1273-3, dated the 7th February 1907.

transfers in the six months amounted to 18·5 per cent. of the whole Signalling Establishment as it stood on the 1st July 1906. This we cannot but regard as an altogether excessive proportion, and it practically amounts to the transfer of the whole staff of every office in three years. The time during which each officer was absent from duty on account of his transfer cannot, we think, be taken as less on the average than ten days, and, on this assumption the total signalling staff was reduced by nearly three Telegraph Masters and by twenty-five signallers throughout the whole period. With such frequent changes it is impossible for Telegraph Masters to have the knowledge, which they ought to possess, of the capacity and character of each of their subordinates. Even a cursory inspection of the departmental orders discloses the fact that a large number of the transfers were for very long distances. We recognise that to some extent this is inevitable, but it constitutes an additional reason for restricting transfers as much as possible. Under the centralised system at present in force it is difficult or impossible to keep transfers at as low a figure as is desirable.

(ii) We are, however, of opinion that the Circle Scheme provides the means of remedying the present unsatisfactory state of affairs. When this scheme is introduced all transfers of signallers and Telegraph Masters within the Division should, as at present, be sanctioned by the Divisional Superintendent, and all transfers from one Division to another in the same Circle by the Circle Officer. Transfer within the Circle should be regarded as the rule, and transfer from one Circle to another as an exception to be justified only on the plea of urgent necessity. All signallers on the General Scale are liable to take their turn in Burma and Assam, and on account of the unhealthiness and expensiveness of these Provinces it will always be necessary to enforce this liability; but even in these cases every effort should be made to retain the staff in the Circle as long as possible. Apart from these special cases, every Circle should have a signalling staff sufficient for its own needs so as to minimise the necessity for outside assistance. When transfers are necessary from one Circle to another, every endeavour should be made, unless the circumstances are quite exceptional, to obtain volunteers. In other cases it will also usually be expedient to call for volunteers unless the delay involved in this procedure involves detriment to the public service. If volunteers are not forthcoming, and transfers have to be ordered, regard should be paid to the hardships which a change of station may involve, and also to the number of transfers which officers have already had during their service. The like circumstances should be taken into consideration in the case of transfers when it has not been practicable to call for volunteers. Subject to these remarks and to the conditions headed (2) to (4) in paragraph 88 of Chapter P of the Telegraph Code,* which seem to us unexceptionable, we think transfers must be arranged in accordance with administrative convenience, and that a considerable latitude of discretion must be left to the officers ordering them. In particular we object to hard-and-fast rules, such as those in paragraph 86 of

* 88 • • • • • In order to avoid expense to Government and hardship to the staff transfers should be reduced to the minimum compatible with the necessity—

- (2) of periodically relieving men at unhealthy or exceptional stations;
- (3) of selecting suitable men for special duties;
- (4) of meeting the general requirements of discipline and efficiency.

Chapter P of the Code, *vis.*, that signallers of the longest service in the Division should be selected for transfer, and that in no case should a signaller of less than five years' service in the Department be transferred, if men who have served longer be available. We believe that when the great bulk of transfers are arranged by the Heads of Circles, who will in many cases be acquainted with the private circumstances of the signallers affected, instances of hardship due to transfer should be very rare, and it should seldom be necessary to send Local Scale signallers outside the area within which they are bound to serve.

(iii) If the avowed policy of the Department to avoid unnecessary transfers is steadily enforced, this will not only conduce to the contentment and efficiency of the staff, but a substantial saving will be effected in the expenditure on travelling allowances. The Examiner of Telegraph Accounts has calculated that this saving may amount to as much as a lakh of rupees per annum, and though we do not think that the materials exist for framing an exact estimate, it cannot be doubted that a large saving is possible.

(iv) In connection with this subject we recommend that the limitation of the special rules for the payment of the travelling expenses of families to cases of transfer between stations more than 200 miles apart (*vide* article 1098, Civil Service Regulations) should be cancelled so far as the Signalling Establishment is concerned. This matter was strongly pressed upon us by many deputations of signallers, and as transfers of the Signalling Establishment occur, so far as we are aware, more frequently than transfers in any other department, we consider that the case of the signallers should be specially provided for. The existing rule which operates harshly in frequent short transfers is an inducement to order long transfers for the purpose of saving the men from pecuniary loss. Very little expenditure is involved in the grant of this concession which will be regarded by the staff as a valuable privilege.

Proposed use
of the designa-
tion Telegrap-
hist.

92. In connection with the general question of the reorganisation of the Signalling Establishment, there is one other matter to which, though we attach no great importance to it, we desire to call attention. Objection has been taken by some signallers to the term "Signaller." It has been represented that this term does not correctly describe the duties which the staff perform, and the name "Telegraphist" has been suggested as more appropriate. Soldiers employed in the Telegraph Department are already known as "Military Telegraphists," "Military Signallers" forming an entirely separate class. In the United Kingdom the name in use is "Telegraphist," and we recommend that this name be generally adopted in India for the classes at present known as Departmental, Postal and Railway Signallers.

Local non-pen-
sionable services
in the towns.

93. (i) Before concluding this Chapter we have still to dispose of clauses (a) and (b) of paragraph 14 (9) of the Resolution which are reproduced in paragraph 48 (i) above. As regards the former we have considered carefully the suggestion that local non-pensionable services should be formed in the Presidency and other large towns. Except in the case of female signallers, who will be referred to in the next paragraph, we are unable to recommend the employment of signallers not liable to transfer. To non-pensionable service there are strong objections. In the first place if the service were non-pensionable it is certain that the class of candidate coming forward would deteriorate. Secondly, the observance of secrecy regarding the contents of messages is a most important consideration, and in order to secure this a trustworthy staff is essential. It cannot be doubted that Government has less control over a

non-pensionable establishment than over a pensionable one, and if signallers were to be entertained on a non-pensionable basis, a distinct risk would be incurred. The danger would be especially great in large towns where the men would be subject to local influences of various kinds.

(ii) As regards recruitment for service in one town only, we think that it would be an administrative inconvenience if there were no power to transfer the men to another place. Undesirable combinations might be formed and the absence of the power of transfer would make them very troublesome to deal with. We are about to propose that female signallers shall enter the Department on a salary of Rs. 50 per month rising by annual increments of Rs. 5 to Rs. 100, and we do not think that lower rates could be offered to a Local Service in any large town. The saving effected by the formation of such a service would therefore be insignificant as compared with the expenditure on the present Local Scale, and the proposal has thus no very decided advantage on the score of economy. For these reasons we think that the scheme must be abandoned.

Female
signallers.

94. (i) Turning to clause (b) we learn from a circular issued by the International Bureau of Berne in August 1899, on the employment of women in the telegraph service of the various Union countries, that women are employed in telegraph offices as signallers, or in other capacities in nearly all such countries in Europe and in several outside Europe, including some British colonies. We have consulted the Governments of Bombay, Madras, Bengal, Eastern Bengal and Assam, Burma, the United Provinces, the Punjab and the Central Provinces on the subject; and the replies which have been received are generally in favour of the proposal to employ women. The replies are printed in Appendix L. Such inquiries as we have been able to make during the course of our tours have also led us to think that suitable candidates could be obtained in several places and that they would be glad of the chance of employment. We accordingly recommend that the scheme of employing women should be tried in selected towns where there is a European or Eurasian community of any size. The system, if found successful, could subsequently be extended. There is in our opinion no objection to the employment of women in the same instrument room as men; but it might be advisable to arrange that at least two women should work together in the same room at the same time. In all offices in which women are employed the provision of a separate cloak room would be necessary.

(ii) The following regulations, which are based on those in force in the United Kingdom, appear to us suitable for adoption in this country:—

- (1) Candidates must be between 18 and 30 years of age; they must be unmarried or widows, and they must be of good health and character.
- (2) Candidates must file a declaration and a guarantee signed by their parents or guardians or some responsible authority that they will live with their parents or guardians or with some approved relation or friend, or in some recognised institution (e.g., The Young Women's Christian Association). It follows from this that women would not be liable to transfer.
- (3) The same educational qualifications should be required as from men.

- (4) Separate training schools should be established for women; but the system of training, and the standard of signalling, should be the same as for men. The training should be gratuitous, but no pay or allowance should be given during the period of training. The candidates would already be supported by their parents or guardians and no necessity exists for granting any allowances until they begin to work as signallers. Moreover, there is some probability that they will not stay long in the Department so that it might often happen that there would be no adequate return for the money spent on their training.
 - (5) All appointments should be on probation for the first year.
 - (6) The hours of work should be eight a day between 8 A.M. and 6 P.M. Women should not be required to work after 6 P.M. or before 8 A.M.
 - (7) Service should be pensionable. It is probable that pensions will seldom be earned, but if the qualifying service is sufficient the same reasons for granting pensions apply as in the case of men. On marriage resignation should be compulsory.
 - (8) The scale of pay should be Rs. 50 rising by annual increments of Rs. 5 to Rs. 100. This scale has been framed after inquiries in several localities and careful consideration of the replies received from Local Governments. The question of the promotion of women to such posts as Telegraph Mistress will not arise for many years and need not be discussed.
 - (9) Women might also be employed on other than signalling duties in places such as certain hill stations, where their employment would be economical or an administrative convenience.
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CHAPTER IV.

OTHER MATTERS REFERRED TO THE COMMITTEE BY THE GOVERNMENT OF INDIA.

95. (i) In the two preceding Chapters we have submitted our recommendations regarding the principal establishments in the Indian Telegraph Department. In this Chapter we shall deal with the remaining subjects which have been referred for our consideration by the Government of India both in the Resolution of September last and subsequently. The first of these points has been stated as follows:—

“ Whether an expert traffic officer should be brought out from England to examine the traffic working of the Department and make suggestions for its improvement.”

Traffic Expert
and Inspect-
ors.

(ii) Since this question was referred to us it has been arranged that an officer of the Post Office of the United Kingdom shall be deputed to India for this purpose with effect from next autumn and for a period not exceeding one year. We anticipate that much benefit will result from this deputation.

(iii) In the Resolution constituting the Committee the Government of India have stated that they are prepared to consider favourably the employment directly under the head-quarters office of special officers to make detailed examinations of traffic working and to devise methods by which it may be improved. It is explained that experience in other countries has shown that, when the increase of messages reaches a certain stage, the employment of such special officers becomes, in the interests of economy, absolutely necessary. We do not think that the development of traffic in this country has yet reached a stage at which this necessity has arisen. The appointments would form an expensive addition to the existing scale, because it would obviously be necessary to employ men of somewhat high official rank and possessed, by long experience, of an intimate knowledge of traffic working, while the whole available Superior Staff will be fully employed under our scheme of reorganisation. That scheme includes a Director of Traffic, who should by no means be limited to desk-work at head-quarters, but should make frequent tours, thus in part fulfilling the duties which the suggested special officers would have to perform. The Circle Officers will also be chief inspectors of traffic within their Circles and constantly on the move during the cold weather. We have elsewhere laid stress upon the great—probably the predominating—importance of this portion of their duties. Thus, while we are fully convinced that the close, constant and personal supervision of traffic working by competent officers on tour will conduce to economy, we consider that, at any rate for a long time to come, ample provision for this purpose will have been made by the appointment of the eight Circle Officers and the Director of Traffic. We may add that if officers, other than the Director of Traffic, were charged with the special duty of examining traffic, there would be some difficulty in defining their relations with Circle Officers in such a way as to avoid impairing the authority of the latter.

96. (i) Second in the list of subjects not already discussed is the very important question regarding the relations of the Post Office and the Telegraph

Department in connection with the combined office system. The reference in the Resolution is expressed in the following terms:—

What measures should be taken to promote closer and more intimate relations between the Post Office and the Telegraph Department in the matter of combined offices, and what principles should govern (a) the opening of new departmental offices, and (b) the combining of offices already separate.

Combined Office System.

(ii) A remarkable feature in the history of the Indian Telegraph Department has been the great success of the combined office system, introduced in 1883, under which a large number of post offices perform telegraph work in addition to postal duties, and the Telegraph Department defrays the expenditure and receives the revenue. This scheme has been the means of extending telegraph facilities in the more important towns and to outlying parts of this country; and though by the end of 1905-06 the number of these offices had reached a total of 2,029 with an annual income of 29 lakhs of rupees, the increase would have been still greater but for the rigid conditions under which guarantees have till lately been required.

Rules for guarantees.

97. (i) The changes made in these conditions in 1904,* together with the rapid expansion of commerce and the general spread of education in India, will, we believe, have a marked effect in stimulating the demand for combined offices; but it will nevertheless be advisable for some years to come to follow a more liberal policy regarding the opening of these offices, even if a proportion of them should prove unremunerative for a year or two. We have received evidence to the effect that even the revised rules are not sufficiently liberal. They require that the whole loss on the working of an office should be made good by the guarantors for five years, and this condition tends to restrict the extension of the telegraph system in various tracts of the country. We are therefore of opinion that a modification of the rules is desirable. In the United Kingdom, where State encouragement to the development of this service is less needed than in India, the guarantor is required to undertake for seven years liability for one-third of the deficit due to the opening of an office; and we consider that the circumstances of this country justify the adoption of a policy on similar lines. We recommend therefore that guarantees should be fixed at half instead of the whole of the estimated loss, the period of five years remaining unchanged. Had this arrangement for calculating guarantees been in force in 1905-06, Government would have incurred an extra expenditure of Rs. 10,460, of which only one-sixth would have been on account of offices guaranteed by private persons. The figures upon which this calculation is based have been supplied by the Examiner of Telegraph Accounts, and will be found in Appendix M.

(ii) In another respect also a change might be made which will be advantageous to tracts of country like the Duars and Assam. It was urged before the Committee that, when the question of the guarantee for an office on a new line is under consideration, the circumstances of the other offices on the same line should be taken into account, and no guarantee should be required if the group of offices taken together are remunerative. We are of opinion that this principle should be adopted in order to promote the extension of telegraph facilities in backward parts of the country.

Expansion of the combined office system.

98. Speaking generally, there is a considerable field for expanding the combined office system, especially in the larger towns. Systematic inquiries

* *Vide* correspondence ending with Government of India, Commerce and Industry Department, No. 1848-S. T., dated 22nd May 1906.

should be made from time to time to ascertain what important post offices in the different parts of the country should be constituted telegraph offices, and one of the chief duties of the Telegraph Circle Officer will be to prepare before the end of each year a programme of combined offices proposed to be opened during the next financial year. This programme should be drawn up on the advice of the Divisional Superintendents of Telegraphs, and in consultation with the Postmaster General, who should be informed as early as possible of the decision arrived at regarding each proposal, so that he may be in a position to have trained signallers ready to take charge of the new offices.

Improvement
of postal
signallers.

99. (i) As four-fifths of the total increase in receipts from messages which took place during the four years ending 1905-06 was derived from combined offices, which now have a gross revenue of 30 lakhs of rupees, it is apparent that the future development of the Telegraph Department depends largely on the success of this scheme; and during our tours we made a point of visiting a considerable number of combined offices in order to ascertain what improvements and modifications are desirable in the organisation and administration of the system. We found that the work in most of the offices is as good as could be expected taking into consideration the standard to which postal signallers are trained; but we are satisfied that this standard is not sufficiently high and should be raised as proposed by both the Director-General of Telegraphs and the Director-General of the Post Office. The improvement in the signalling capacity of postal signallers will not only ensure the greater efficiency that is required in combined offices, but will increase the average outturn of the departmental signallers, since the rate at which a signaller can dispose of traffic is limited by the speed of the signaller at the other end of the wire; and many of the departmental signallers, who now work on combined office circuits, are unable to show a good outturn on account of the slower working of the postal signallers. We therefore recommend, on grounds both of efficiency and economy, that the standard by which postal signallers should qualify before employment on telegraph duties be raised, except in Burma and Assam,* from 16 to 20 words a minute in plain language; that they should pass a Code and Figure test of 16 words except in these places; that the course of instruction be extended from six to nine months; and that after leaving the training class the signallers be employed in a Government Telegraph Office from one to three months, so as to fit them thoroughly for the practical work of a signal office.

(ii) It will be impossible in most parts of the country to secure suitable candidates prepared to undergo training for nine months at their own expense, and we recommend that a monthly allowance, ranging from Rs. 7-8 to Rs. 20 a month, according to the circumstances and requirements of the different Circles, be granted to postal probationers during the period of their training; and that while they are employed in the departmental offices they should be granted the pay of reserve signallers, which is usually Rs. 20 per mensem. A similar allowance is already given to all departmental probationers as well as to the postal probationers in Burma, and we are in agreement with the view of the Director-General of the Post Office that it is now necessary to extend the grant of the allowance to all postal probationers. The expenditure involved in granting this allowance will be covered by the saving that will accrue to the Telegraph Department if the proposal† to use postage instead

* See paragraph 89 (iii) above.

† Vide paragraph 141 (6) below.

of telegraph stamps and to abolish commission on postage stamps is carried out.

Causes of delays to traffic.

100. In connection with the work of postal signallers it is but fair to mention that much of the delay to the telegraph traffic of combined offices has been due to the excessive number of offices on one circuit; and though there has recently been an improvement in this respect, we consider that further measures in this direction are necessary, and that ordinarily the number of offices on one circuit should not exceed five. Delays on these lines are not as a rule caused by the rush of traffic, but by the offices having to use one wire in turn, and the inconvenience is aggravated by the existence of three classes of telegrams. Instances also came to our notice of delays to traffic due to the insufficient establishment of combined offices.

Pay of postal signallers.

101. It has been urged on all sides that the scale of pay of postal signallers throughout India is inadequate with reference to the nature of the work required of them, and that, owing to the paucity of appointments on pay exceeding Rs. 40, postal signallers, when they have attained their greatest efficiency in telegraphy, have to be promoted in the ordinary course to postal appointments on higher pay and in this way are entirely lost for telegraph work. In the United Provinces, for example, the grading is as follows:—

Whole-time signallers.	Pay. Rs.
2 on	60
10 on	40
34 on	30
1 on	25
77 on	20
<hr/> 128	

Telegraph allowances given to postmasters or clerks.	Amount. Rs.
1 on	40
1 on	30
1 on	25
3 on	20
8 on	15
1 on	12
66 on	10
43 on	5
1 on	2
<hr/> 125	

We are fully satisfied of the necessity that exists for improving the rates of pay generally, and as these must necessarily vary from province to province, the Director-General of the Post Office is in the best position to decide with reference to local circumstances what emoluments should be attached to each signalling appointment.

Annual grant to the Director-General of the Post Office for the working charges of combined offices.

102. When reviewing our financial proposals we mentioned in paragraph 17 above that we intended to recommend an annual grant to the Director-General of the Post Office for the working charges of combined offices. We will here proceed to state this recommendation in detail. Recently an arrangement was made between the Post Office and the Telegraph Department,

in accordance with which 3rd class offices are worked by the Post Office on a contract system based on a fixed charge for each office; and the Director-General of the Post Office arranges for the whole establishment of such offices and fixes the pay without reference to the Telegraph authorities. This simple procedure has saved a vast amount of correspondence between the two Departments regarding petty details besides reducing account work greatly; and we consider that the principle thus adopted of authorising the Director-General of the Post Office to settle the staff and pay for 3rd class combined offices should be extended to 1st and 2nd class offices also, as well as to all items of recurring and contingent expenditure, subject to the condition that the entire charges incurred do not exceed the total of an annual grant placed at the disposal of the Director-General of the Post Office for the working of all the combined offices under his control. At present, if an extra messenger or signaller or an increase in rent is needed for a 2nd class combined office, the Superintendent of Post Offices has to obtain the assent of the Telegraph Sub-Divisional Officer to the proposed revision; then he addresses the Postmaster-General, who, after obtaining the concurrence of the Superintendent of Telegraphs, applies to the Director-General of the Post Office for formal sanction. The latter forwards the proposal to the Director-General of Telegraphs, who has in the meantime been addressed by the Divisional Superintendent of Telegraphs on the subject. The Director-General of Telegraphs then communicates his formal sanction to the Director-General of the Post Office, who intimates the fact to the Postmaster-General and to the Accounts Office, and the Superintendent of Post Offices is then informed of the revision. Thus a vast number of references has to be dealt with in connection with each case, and much delay may arise in obtaining sanction to a petty revision even in an urgent case. The Director-General of Telegraphs almost invariably sanctions the proposals for revision which are made to him by the Director-General of the Post Office; and as the latter is responsible for the proper working of the offices and for providing the staff, it is right that he should be authorised to sanction the establishment required for all classes of offices, subject to the limitations that he may not create any appointment over Rs. 100 per mensem, and that the total grant placed at his disposal is not exceeded. It may be mentioned that these are the conditions under which the Director-General of the Post Office is empowered to sanction postal establishment proper.

Method of fixing
the grant.

103. Though the figures noted below* show that during the past ten years the total expenditure incurred on account of fixed establishment, rent and

YEAR.	RECEIPTS.		EXPENDITURE.*	
	Number of combined offices.	Revenue realised during the year on sent messages.	Amount.	Percentage of expenditure on revenue.
		Rs.	Rs.	
1896-97	1,314	18,54,070	5,48,709	29.594
1897-98	1,377	20,88,999	5,84,292	28.037
1898-99	1,472	18,72,556	6,12,143	32.69
1899-1900	1,612	24,01,372	6,66,762	27.765
1900-01	1,691	25,80,162	7,23,286	28.032
1901-02	1,765	24,56,979	7,72,176	31.427
1902-03	1,806	24,26,330	7,97,777	32.879
1903-04	1,859	25,12,934	8,20,982	32.670
1904-05	1,917	26,70,101	8,58,471	32.151
1905-06	2,029	29,20,347	9,11,291	31.205
1906-07 . . . . .	...	30,20,000	9,42,000	31.19 Estimate.

contingencies in working combined offices has varied almost uniformly with the amount of the revenue, we are of opinion that it is not advisable at present to fix the grant to be placed at the disposal of the Director-General of the Post Office of India at a percentage of the gross earnings of all the combined offices for the year owing to the effect on receipts or expenditure which might be caused by special circumstances, such as the grant to the public of a concession in rates or the occurrence of a war or famine. It seems, however, practicable to prescribe that in ordinary conditions the grant should be subject to the limitation that it shall not exceed a percentage of the gross revenue, and we suggest the adoption of this course. The experience of a few years will show what percentage can fairly be fixed as the maximum limit for the grant, but we think that as a beginning 35 per cent. of the gross earnings may be taken as a fair basis for the arrangement. Our reason for suggesting this figure, which exceeds the actuals of the past four years by about 3 per cent., is that additional expenditure will be required in order to raise the pay of postal signallers generally, to create well-paid appointments of head signaller for the more important combined offices and to increase the reserve of signallers. In addition to the advantages already explained, an arrangement on these lines will save a large amount of account work in both the departments and will give the Post Office a more direct interest in the successful working of combined offices.

Recruitment of the Local Scale from postal signallers.

104. (i) We consider that the experiment should be made of recruiting the Local Scale of departmental signallers from the ranks of the postal signallers who have qualified by the standard of 20 words in plain language and 16 words in the Code and Figure test and have been found to be efficient operators. The signallers recruited would also have to pass any higher departmental test that might be prescribed. In making this recommendation we have kept in view the effect which this measure, if permanently adopted, will have in stimulating the postal signallers while in the Post Office to perform their duties to the satisfaction of the Telegraph authorities, in improving their prospects as signallers and also in saving Government the heavy expenditure that would otherwise have to be incurred in training departmental candidates, while there is a large supply of postal signallers who in the ordinary course would cease to be employed in the telegraph branch of the Post Office after a few years.

(ii) The Director-General of Telegraphs is in favour of this proposal, but the Director-General of the Post Office of India has not supported it on the grounds that it would deprive the Post Office of about 40 of its best signallers annually and that postal signallers should have their prospects of advancement in the Post Office so improved as to render it unnecessary to promote them into the Local Scale of the Telegraph Department. While agreeing with him that a general improvement in their pay in the Post Office is required and should be made gradually, we consider that this system of recruitment for the Local Scale is well worthy of a trial.

Telegraph training of Postal Superintendents.

105. It was frequently brought to our notice that Postal Superintendents are at a great disadvantage in controlling their signalling staff owing to their ignorance of the technical details of telegraph work, and that for this reason complaints made by Telegraph Officers regarding the working of combined offices could not be disposed of with reasonable promptitude. We consider that this state of affairs should be remedied by requiring the younger Postal Superintendents now in the service, and all those appointed in future, to undergo a course of training in telegraphy sufficient to enable them to understand the ordinary irregularities which come before them in their daily work. The

extent and nature of the training should be settled between the Directors-General of the two Departments.

Inspections of combined offices.

106. It has also come to notice that frequent inspections of unimportant combined offices impose a serious burden on Telegraph officers, who could be more usefully employed on other duties ; and we are of opinion that such offices could be properly looked after by a cheaper agency, and that the time has come when regular inspections of 3rd class combined offices should be entirely performed by officials of the Post Office. For this purpose it will be necessary to train Postal Inspectors in telegraphy or to appoint postal inspecting signallers as may be found suitable to the different parts of India, and it will be an important duty of these officials to conduct a yearly examination of postal signallers to ensure that they are not falling off in efficiency. As the Postal Department has not at present Inspectors trained in telegraphy, we suggest that in the beginning competent inspecting signallers be lent from the Telegraph Department for this duty. Officers of the Telegraph Department will, as hitherto, visit combined offices of all classes when they wish, and make suggestions for improving their working.

Reserve of signallers.

107. The effect of these proposals will be that the Post Office will have in its employment a large reserve of signallers of such a degree of efficiency that their services could, in case of great emergency, such as the occurrence of war, be placed at the disposal of the Telegraph Department temporarily to replace Military Telegraphists who might have to be withdrawn in very considerable numbers for duty at the front. We recognise that the number of spare signallers and clerks employed by the Post Office will have to be large, so that this liability may be met without inconvenience to postal work. In this way the Telegraph Department will avoid the necessity of maintaining permanently a large and costly reserve of civil signallers to take the place of Military Telegraphists whose services might have to be spared at short notice.

The opening of new departmental offices and the combining of offices at present separate.

108. We have here to report on the points referred to us in the second part of paragraph 14 (6) of the Resolution of September last. Our opinion on the principles which should govern the opening and combining of certain offices is as follows. We consider that no signal office should be departmental except for traffic, technical, military, strategical or political reasons. The telegraph service should meet the commercial and public interests and we consider that a departmental office is justified on the grounds of traffic, when it has been found that an efficient service cannot be rendered by the postal staff. The efficiency of the service depends on the class of postal candidates recruited, the training which they undergo and the supervision which is exercised over them. In some parts of the country, *e.g.*, Peshawar, Delhi and Poona, combined offices dispose of traffic considerably exceeding 100 messages a day without difficulty, but there are other tracts, like Assam and Burma, where competent postal signallers are not easy to obtain, and where in consequence the necessity may arise to have a departmental office for a traffic of less than 100 messages a day. The proposals which we have made for improving the training, pay and supervision of postal signallers will, it is expected, greatly increase the efficiency of combined offices and render the conversion of such offices into departmental a matter of rare occurrence.

Reasons for maintaining certain small offices as departmental.

109. There are many departmental offices with light traffic at different military stations, which are manned entirely or largely by Military Telegraphists. The object of maintaining these offices as departmental is to enable the

Telegraph Department conveniently to keep a large number of Military Telegraphists in training for service when required; and as the Military authorities do not propose that any change should be made in the manner of training Military Telegraphists, we recommend no change in the status of these offices, which are not unduly expensive. There are also some small departmental offices of observation in different parts of India which should not be placed in charge of postal signallers, until the improvements in their training and work, which have been indicated, are made. In some tracts like Kashmir and Burma the signallers in charge of these offices are required to proceed personally on the line in cases of interruptions, and it is a question to be decided purely by experience whether postal signallers under the control of the Post Office should be entrusted with the charge of offices where line work is included among the ordinary duties of the signallers.

Proposals for conversion of offices.

110. (i) Each proposal for the conversion of an office to departmental or combined should be considered on its merits by the Postal and Telegraph Heads of the Circle in personal consultation, and there should be no practical difficulty experienced by them in settling each case with reference to the work done by the office and the nature of any complaints made against it. The point for consideration in such cases is whether a reasonably efficient and reliable service can be afforded to the public by a combined office, and, where this condition is satisfied, there is no reason for having the office departmental. It is waste of force and money to keep a small office in charge of a well-paid departmental signaller, if the work can be done efficiently by a cheaper postal signaller, and the question of converting such offices should be periodically examined as the work of the postal signallers improves in consequence of the higher standard to be introduced.

(ii) We considered whether we should prepare an exhaustive list of the departmental offices which might be converted into combined, and we found that it would be necessary to visit each office in question and discuss each case with the Telegraph and Postal authorities before arriving at a final decision. This could not be undertaken by the Committee, but with the facts that are before us we think the following offices might be converted :—

Byculla, Ahmedabad Camp,* Chilas, Drosh, Chitral, Mustaj, Taru.

Gupis, Kamptee, Thayetmyo,† Rangoon Secretariat.†

Loi Mwe, Barhi, ‡ Vengurla, Mysore City, Calcutta Park Street.

A few others which we proposed to include in the list have been made combined since the Committee assembled. In the case of all these offices the question of the accommodation and the posting of efficient postal signallers will have to be gone into by the local officers, and we expect that these conversions will result in a large saving of expenditure.

111. (i) We think it will be convenient if we discuss together items (7) and (8) of paragraph 14 of the Resolution of September. These items are as follows :—

(7) *Whether the accounts and audit system of the Telegraph Department should be amalgamated with that of the Post Office.*

(8) *Whether any, and if so what, changes are required in the existing*

reorganisation of the Check Office and amalgamation of the Postal and Telegraph Accounts.

* As soon as the troops are removed.

† Subject to the approval of the local Government.

‡ When the wires are transferred to the posts along the railway line.

organisation of the Check Office in view of the expansion of message traffic, and in particular :—

- (a) whether any part of the work can be transferred to any Accounts Department, and*
- (b) whether any part of the work can be decentralised and transferred to the Circle Officers whom it is proposed to create.*

The two questions are intimately connected because the amalgamation of the accounts depends upon the decentralisation of the Check Office.

(i) We are of opinion that the general charge of the Check Office should be vested in the Examiner of Telegraph Accounts. When this change takes place the appointment of the Superintendent of the Check Office will be abolished and a corresponding reduction will be made in the number of Superintendents' charges tenable by officers of the Telegraph Department. But as the Examiner could not without assistance undertake such a large addition to his ordinary duties, it will be necessary to attach to his staff an additional Accounts officer, probably of the rank of an Examiner, Class IV, or a Deputy Examiner, Class I. If the average salary of such an officer be taken at Rs. 700 per mensem and that of the Superintendent under the present system at Rs. 850, there will be a small saving of Rs. 150 a month or Rs. 1,800 per annum. We further think that, as an exception to the general charge of the Examiner and as a temporary measure, the Fault and Complaint Section should be placed under the Director of Traffic, with a Sub-Assistant Superintendent in immediate charge, until the Examiner can take it over also; and when the Examiner takes over this section, which we believe he will be in a position to do as soon as he has reorganised the Check Office, the Sub-Assistant Superintendent can be retained to assist the Examiner temporarily, or permanently as may be found necessary.

(ii) We consider that unless a great improvement were made in the working of the Check Office immediate decentralisation would be necessary. We believe, however, that as the result of placing the office under the Examiner the methods of work will be greatly simplified, and the necessity for increasing the accommodation of the office in proportion to the increase of traffic will become less pressing. We are of opinion that the Check Office must be reorganised by the Examiner, and that the reorganisation of the office by him and the simplification contemplated must precede any measure of decentralisation. This complete reorganisation will, it is expected, occupy the Examiner two or three years, and on its completion there will be no difficulty in deciding, with reference to the increase of traffic, the size of the office establishment and the accommodation required, whether decentralisation must then be effected at once. How soon after this reorganisation the decentralisation of the Check Office will have to be carried out, we are unable to state definitely, but we think there is every indication that it must be effected within a period of five years from the present time. As soon as this measure is decided upon, the Examiner's Office, including the Check Office, should be amalgamated with the Postal Central Audit Office and decentralised to the same extent as the Postal Accounts. The Fault and Complaint Section in the Examiner's Office also would simultaneously be decentralised to the like extent. There are at present only three Postal Audit Offices, and though it may not at first be necessary to have one joint audit office in each Circle when the amalgamation of the two Accounts Departments occurs, this step will, we believe, be found necessary before many years.

(iv) The chief reasons for amalgamating the accounts offices of the two Departments are—

- (a) Decentralisation of the two Audit Departments and the Check Office to the extent that is desirable can be carried out with much greater economy, and therefore in all probability much earlier than if amalgamation did not take place.
- (b) The combination of the Audit Branches of the two Departments will enable Government to replace the Comptroller of the Post Office and the Examiner of Telegraph Accounts by an officer of the high position and authority of an Accountant-General.
- (c) Accounting between the two Departments will cease and duplication of work will be avoided.
- (d) The difficult question of accommodating the Examiner's Office and the Check Office in Calcutta will constantly recur so long as they remain centralised.

This question is a very pressing one at present, and any arrangements now made will have to be reconsidered from time to time as traffic increases.

- (e) The work of Circle Officers of both Departments would be greatly facilitated if they were in close touch with Accounts officers at their head-quarters.

(v) One reason, which weighs strongly with us in recommending the amalgamation of the two Accounts Departments and the decentralisation of the whole including the Check Office to the extent ultimately of having one Audit and Check Office in each Circle, is that this arrangement when carried into effect will enable the Circle and Divisional Officers of the Department to investigate and finally dispose of all public complaints relating to Inland telegrams. Under the present system the Check Office at Calcutta deals with complaints regarding traffic, often without having to refer to the local officers, and we consider that this system is detrimental to the authority and weakens the responsibility of the latter, and prevents them from being in as close touch with the public as is desirable.

(vi) It has been urged that the Check Office work must all be done at one central place for the whole of India because of the difficulty that would arise in getting together the drafts at local centres. We agree that Foreign telegrams can best be dealt with at one centre, but as regards Inland telegrams there will be no practical difficulty in decentralising. Each Audit Office will receive all the drafts in connection with the messages originating in its Circle.

112. (i) In connection with the present matter we have examined the subject of the accommodation and arrangement of offices in the Central Telegraph Building at Calcutta with special reference to the question of providing a new Signal Office. The booking hall is inadequate for the needs of the public and of the Department; the space allotted to the delivery branch is totally insufficient; the signal room is too small and the instruments are in consequence arranged too closely together, while the space available for the automatic instruments is already over-crowded. The room allotted to clerks is not sufficient; there is no adequate sleeping accommodation for the forty men on the night watch who get a few hours' sleep when not required for duty, and the passages have to be utilised for this purpose; there is the greatest difficulty in obtaining rooms for the officers to work in and we found an instance of four officers being required to sit in one room.

Accommodation in the Central Telegraph Building, Calcutta.

(ii) We consider that the need for additional accommodation is most pressing, and as no re-arrangement or structural alterations will render the Signal Office suitable for the requirements of the Department for any considerable time to come, we are strongly of the opinion that a new Signal Office should be built on the site of the Medical Stores adjoining the existing office.

(iii) It will probably be three years from now before the new Signal Office proposed will be ready for occupation, and some arrangements must be made to meet the immediate demands, and those that will arise during the next three years for extra accommodation for both the Signal Office and the Check Office and to provide room for the Statistical section of the Check Office which we are about to recommend.* As the only office that can be moved easily is that of the Director-General of Telegraphs, we consider that this office should be located elsewhere temporarily until such time as the new Signal Office is built. When this has been done, and the Examiner's Office and Check Office are decentralised, the existing and the new building will suffice to provide all the office accommodation required.

(iv) We have considered the desirability of locating the Examiner's Office in the Central Telegraph Buildings, so that the Examiner might have his own and the Check Office under him in the same building during the important stage of reorganisation. This is not, however, we think, possible of attainment, even when the Director-General's Office vacates, as the rooms which will then be available will not be sufficient to accommodate the Examiner's Office. The building is subdivided into a number of small rooms, is unsuited for a large office, and does not admit readily of structural alterations to make it suitable.

Simplification
of work in
the Check
Office.

113. (i) In order to complete our proposals for the reorganisation of the Check Office it is necessary that we should discuss not only the administrative machinery by which the work is to be carried on, but also the nature of the work itself and the arrangements which should be made for its simplification and reform. The procedure in force in the Check Office has been described in great detail in a letter No. 165-G., dated 14th August 1906, to the Government of India from the Director-General of Telegraphs, as also in a report submitted to Government by the present Accountant-General, Public Works Department, and it is not necessary for us to describe it afresh. We propose, therefore, premising that our remarks apply to Inland message traffic only, to proceed at once to the statement of the system which we think should be adopted.

(ii) In dealing with the question it is desirable first to define briefly the functions of the Check Office proper and then to deal separately with each. The functions are briefly, (I) Audit of the Revenue of the Department, (II) Accounting for and adjustment of the Revenue, (III) Custody of drafts and subsequent references to them, and (IV) Preparation of Revenue Statistics.

Audit of
Revenue.

114. (i) For the audit of the revenue to be complete the points to be looked to are: (a) that every message and every word signalled is paid for except those allowed to be sent free, (b) that the correct amounts due are recovered, and (c) that the amounts collected are paid into the Treasury. The first requirement is met under the present system by a rough count of the drafts as received against the total number as shown in the invoice, and by pairing a certain percentage of the received and sent drafts; but as the pairing does not extend to a comparison of the words in the drafts, it is possible that more words than are paid for may be signalled without the

* *Vide* paragraph 118 below.

Check Office discovering the fraud. It was to meet this contingency that the Accountant-General, Public Works Department, suggested that signal offices should prepare statements of the messages received by them and the value of each such message. We have given careful consideration to this proposal and are not in favour of it. The danger of frauds of this kind is very slight in those offices where the signalling and booking are done by different men, and is only likely to arise in those offices where the same man is both booking clerk and signaller. Further, we consider that the proposal would throw much extra work on the larger departmental and combined offices, and that the expense would prove excessive. It will be enough if the messages despatched from those offices, where the same officials do both booking and signalling, are compared occasionally with the corresponding received drafts.

(ii) The proper method of meeting the first requirement is, we consider, a careful check on the serial numbers, whether inserted by machine or by hand. When the bundles of "sent" messages are received in the Check Office they should be examined to see that the opening number follows the number on the message last received and that the numbers on the messages are consecutive and none missing. In addition a certain number of sent and received drafts should be paired to see that "sent" messages exist corresponding to the received ones. At present 25 per cent. of the "sent" messages are so paired, and we consider that this percentage on the total is sufficient; but it should be so applied that more than 25 per cent. of the messages hand-numbered are paired, the percentage in the case of those machine-numbered being decreased to adhere to the 25 per cent. on the total.

The second requirement is that the correct amounts due are recovered. This safeguard is provided by what is known as "cash checking," a check which consists of counting the words in the drafts, calculating the charge and seeing that the stamps affixed are of the same aggregate value as the total charge. Indirectly, the stamps are examined to see that none have been used before and that they are otherwise correct. This is the most important revenue check, and at present 87½ per cent. of the messages are subjected to it, though in times of pressure this rule is relaxed with the special sanction of the Director-General of Telegraphs. It may not be necessary to apply this check to every message, but we consider that it should be applied to as large a percentage as practicable; the actual percentage being fixed by the Accountant-General, Public Works Department, in consultation with the Examiner, and no modification being made without the Accountant-General's previous sanction.

(iv) The third requirement is that the amounts collected are paid into Treasury. With the exception of those few cases when stamps are not used and payment is made directly into Treasury, or where for want of stamps combined offices remit collections to the Check Office by money order, this requirement is provided for outside the Check Office by the rule that all inspecting officers shall count the stamp imprests of offices, and satisfy themselves that cash or stamps exist to the full value of the imprests. This seems all that is required.

Accounting
for the
Revenue.

115. (i) At present every signal office sends to the Check Office an elaborate statement, known as the sent register, in which every message is detailed with its number, date and time, station to, number of words chargeable, value in the column for its class and other particulars. The preparation of

this statement involves a considerable amount of work in signal offices, as well as delays to messages by the practice that exists in most small offices of posting up the register before messages are signalled; and the examination of its many details imposes an excessive amount of work on the Check Office. In England this register has been abolished and no exact account of the revenue is maintained, an approximate estimate of the receipts of the year being framed from the earnings of two weeks selected as most likely to give accurate results. But in that country the Postal and Telegraph Departments have been amalgamated, and telegraph revenue and expenditure are but a part of the whole; moreover telegraph rates may be said to have attained finality; whereas in India the two departments are distinct and finality in telegraphic rates has not been reached. We consider, therefore, that it is necessary, for the present at any rate, to maintain an exact account of the revenue, though at the same time it should be seen how the approximate estimates, calculated on the receipts of two weeks' traffic only, compare with the actuals with a view to ascertaining whether an approximation so calculated would not be sufficiently accurate for all practical purposes.

Simplification of the sent register and its consequences.

116. (i) Though we think it is necessary to keep an exact account of the total revenue, we consider that this account need not be kept in the same detail as at present. The existing practice is for the receipts under each of the following heads to be accounted for exactly:—

State subdivided under	Private subdivided under	Press subdivided under	News free, etc.
Urgent.	Urgent.	Ordinary.	
Ordinary.	Ordinary.	Deferred.	
Deferred.	Deferred.		

This division is wanted for statistical purposes; but it is not essential for the purposes of arriving at the total revenue of the Department or of ascertaining whether the Department as a whole is paying its way. It merely shows the number of messages of and the receipts from each class. Owing to the minimum charge the average number of words in each class of messages cannot be calculated from the receipts, though this information is essential when dealing with any proposal to modify rates. We consider that the division into State, Private, etc., and Urgent, Ordinary and Deferred can be ascertained with sufficient accuracy from the messages of two weeks in the year, and should be prepared along with and at the same time as the other statistical information, the compilation of which will be proposed below.

(ii) Further, the name of the office to which each message is booked is also entered in this register against the message. It has been contended that this information is essential for Check Office purposes, as in Criminal Court and other special cases that office is frequently required to produce messages, the only details supplied being the sender's name, and the office to which the telegram is booked, and that if the name of the "station to" is omitted from the sent register much extra labour will be involved in the finding of the particular drafts wanted. Admitting that the abolition of this column will throw extra work on the Check Office, we nevertheless consider that this will be more than compensated by the saving of work in signal offices, as these offices will then be saved the labour of writing ten million names, and the saving will increase as traffic grows. We recommend therefore that this column should be excluded from the sent register.

(iii) If the modifications we have proposed are accepted the sent register should then be confined to showing merely the numbers of the messages and the amounts, all the other details now shown being done away with. This will bring about a considerable saving of clerical labour in signal offices, and effect a reduction of work in the Check Office itself, as there will be fewer particulars to check and fewer columns to add. The examination of messages in the Check Office will then consist first of the scrutiny of consecutive serial numbers; secondly, of the cash check and the simultaneous comparison with the entries in the sent register; thirdly, of such pairing and comparing as may be ordered—practically the present examination, pruned of all refinements and with a more systematic check of essentials, the underlying principles being the continuity of the serial numbers and an efficient cash check.

(iv) The proposed modification of the sent register will admit also of a simplification of the work now done by the Routine Branch on the first receipt of the bundles of drafts. Sent, received and transit drafts of each office are now received packed in one bundle with an invoice enclosed. With the modified form of sent register proposed it will be possible for this form to serve also as the invoice of the sent drafts. Signal offices should then be instructed to prepare separate bundles for the sent, received and transit drafts, treating the sent register as the invoice for the sent drafts, and for the received and transit preparing small invoices showing merely the number of drafts enclosed. As signal offices have now to sort the sent, received and transit drafts separately, and to send them to the Check Office in separate packets enclosed in the main bundle, no additional work will be thrown on them, but work will be saved in the Check Office as the bundles without being opened can be sent direct to the sections that will have to deal with them, instead of the bundles as now being first opened, the sub-packets counted and sorted out and the bundles refastened. It will save too the register now maintained by the registering clerks. Further, if all information as to classes is obtained from the traffic of two weeks it will not be necessary for signal offices to sort the drafts into classes and they should be sorted in numerical sequence. It will be necessary to introduce fresh wrappers for the bundles showing clearly the nature of the drafts they contain, but this and other details, such as the best method of picking out those few drafts requiring special treatment, may be left to the Examiner to elaborate; it is sufficient if the broad lines to be followed are laid down here. It may be mentioned that a modification in the direction here advocated has lately been introduced, the bundles of drafts from departmental offices being now sent unopened to the Message Branch; and the change has been found to work well. For want of space this modification in past procedure has not been extended to the drafts from combined offices.

Other suggestions for simplification of work.

117. Other directions in which simplification of work seem possible are the following:—

(a) We have recommended elsewhere * the abolition of the commission now given on the sale of postage stamps. This change will save work in the Check Office which will be relieved of the calculations required to arrive at the amount of commission to be paid by the Department.

(b) If there are no international or legal objections the time during which inland message drafts are kept should be reduced from four to three months.

* *Vide* paragraph 141 (5) below.

- (c) Licensed systems should be allowed to retain the drafts of messages originating and terminating on the same system and to destroy them after the specified period, an officer of the system being responsible for their proper custody and destruction.
- (d) If postage labels are to be used in place of telegraph labels,* the Director-General of the Post Office should be asked to agree to all Telegraphic Money Orders being stamped by the Post Office before they are sent to the Telegraph Office for despatch. The Post Office collects the telegraph charge from the sender and as there are fixed charges for these telegrams the Post Office knows what stamps should be affixed. The proposal, if effected, will save much work in the Check Office as there will then be no bills against the Post Office to prepare, and Telegraphic Money Orders need not be treated separately.
- (e) There is an adjustment with the Post Office of sums collected and amounts distributed on account of express charges. It has been ascertained that the resulting balance at the end of each year is small, and it is suggested that each Department should retain its own collections and charge off its disbursements in its own accounts. This arrangement will save work in the Check Office.
- (f) Elaborate monthly statements showing the number and value of all telegrams from both departmental and combined offices are now prepared for submission to the Director General of Telegraphs, a copy of the statement relating to combined offices being sent to the Director-General of the Post Office. These statements impose much work on the Check Office, and as the Director-General of Telegraphs can at any time obtain from the Check Office such information as he may require about an office, and every combined office sends to the Post Master General of the Circle on the 1st of each month a statement showing the number of messages and revenue earned during the preceding month, the preparation of these statements by the Check Office seems unnecessary.
- (g) The Accountant-General, Public Works Department, recommended that the punching of the stamps on message drafts should be discontinued. We received evidence on this point, and though it was generally admitted that the punching of telegraph labels was not necessary, yet it was contended that it was necessary to punch postal labels as these, even when otherwise defaced, have a comparatively high market value. The punching of these stamps necessitates the employment of four men only and, as our proposals to abolish separate telegraph stamps will necessitate the printing of postage labels of high denominations, we consider that punching should be continued for the present.

Statistical
Branch.

118. (i) We are much impressed by the great dearth of statistical information possessed by the Department, the exactness aimed at in the preparation of the few statistics that are maintained and the almost entire absence of collaboration between the Examiner's Office and the Check Office. The statistics, with the exception of those showing the division of the traffic into the main classes, are prepared only spasmodically for particular inquiries, there being no separate branch organised for their systematic preparation. We feel that the heads of the Department must have been placed at serious disadvantage in

* *Vide* paragraph 141 (5) below.

their administration by this lack of information, and we strongly urge the formation in the combined Check Office and Examiner's Office of a Statistical Branch which, in a Department like the Telegraph Department, is essential to good administration. We recognise that this proposal entails expenditure, but we consider that the money will be well spent, and that the measure is one likely to effect economies in other branches of the Department resulting in savings exceeding its cost. Too great exactness in the preparation of the statistics required should not be aimed at, and it will be enough, following what is done in England and on the railways in this country, if the statistics are based on the traffic of two weeks, one chosen from each half-year as being representative of the traffic as a whole.

(ii) The statistics which we think should be kept are the following:—

I. The division of the traffic into the main classes, State, Private, Press, News Free, etc., with the further division of each into Urgent, Ordinary and Deferred. Under each of these sub-divisions should be shown the number of words in the preamble, in the address and in the text and the average amount realised per telegram. The statistics kept up at present show the division into the main and minor classes with the average amount realised per telegram, but the average number of words in the preamble, address and in the text is not shown, and this information is very necessary.

II. Signal office statistics giving details of the staff employed in each Departmental signal office, the outturn of the office and the average outturn per man. These statistics should show:—

- (a) Number of messages divided into—sent, received and transit.
- (b) Staff employed in the signal offices showing specially number of Sub-Assistant Superintendents, Telegraph Masters, Testing Telegraph Masters, signallers, booking clerks, despatching clerks, other clerks, delivery peons and office peons.
- (c) Percentage of supervising staff to signallers.
- (d) Percentage of supervising staff to clerks.
- (e) Average number of messages disposed of per signaller.
- (f) Average number of messages disposed of per booking clerk.
- (g) Average number of messages disposed of per despatching clerk.
- (h) Average number of messages disposed of per delivery peon.

The offices in the statement should be so grouped one below the other, as to afford a ready means of comparison between similar offices.

III. Statistics showing the trend of traffic and the main streams it follows. This is necessary for a proper distribution of lines and will provide information showing when circuits are over-burdened, when and where new wires are wanted and what additional wires will best relieve congestion. Information on these points will be required by Circle Officers for the offices in their Circles as well as by the Director-General for the Department as a whole. It should therefore be collected by Circles, the figures relating to the larger streams being then incorporated into a statement for India generally.

IV. Statistics showing the outturn and cost of traffic disposed of by each kind of automatic instrument, as compared with hand signalling.

V. Average cost of maintaining a mile of wire in each Division. At present there are no figures showing this information which would be very useful as a check on expenditure and, by comparing the averages of different years, as a means of ascertaining whether an officer was working economically. It is

recognised that the average costs will vary in the different parts of India, but it will be useful to bring out the differences and to see whether they are justified by the varying conditions.

(iii) These are the principal statistics which we think should be compiled. Government and the Director-General will probably from time to time order the up-keep of other information, but all should, in the same way, be prepared on the smallest data likely to give accurate results.

**Store Branch.
Description of
the present
system.**

119. (i) The next question referred to us by the Government of India is that of the reform of the store system. We have been asked (paragraph 14 (11) of the Resolution)—*whether any, and if so what, changes are called for in the existing stores system of the Telegraph Department.*

(ii) The Department has a chief store depôt at Calcutta, main depôts at Karachi, Bombay, and Madras, and minor depôts known as Store Branch agencies, at Rangoon and other places in India and Burma. The chief depôt at Calcutta is under the Superintendent of Stores. This officer is not a regularly trained Store-keeper, and the appointment belongs to the ordinary cadre of Superintendents, and is held by any officer of that rank whom the Director-General may select for it. The main depôts are in charge of Sub-Assistant Superintendents except that at Karachi, where, under an arrangement between the two Departments, the Superintendent in charge of the stores belonging to the Indo-European Telegraph Department is also in charge of those of the Indian Telegraphs. The Store Branch agencies are generally in charge of the Telegraph Masters of the offices where the stores are located; but at Rangoon a Telegraph Master is employed entirely on this work. The general control of the Branch is vested in the Director of Construction; and that officer, and not the Superintendent of Stores, is required to inspect main depôts and the Rangoon agency. The inspection of sub-agencies is left to Divisional Superintendents.

(iii) It is one of the rules of the Department that no stores shall be issued without the orders of the Superintendent of Stores; all indents, from any part of India or Burma, have first to be made on him and he then decides from which depôt the stores shall be supplied. It will be seen therefore that the control is dual, for though the entire responsibility for the issue of stores lies with the Superintendent, yet the Director of Construction is required to inspect depôts and to examine into the method of the custody of stores. Further, all estimates for large works have to go to the Superintendent of Stores, who estimates the value of the stores required and calculates freight charges from depôts to the sites of works. This is known as the Store Branch portion of estimates, and the Superintendent of Stores is consequently responsible for this portion of the expenditure. He has a staff of clerks to assist him in this work.

**Defects of the
system.**

120. We consider the system unsatisfactory. To place a trained Telegraph Engineer in charge of stores is a waste of his special qualifications; and as he has not been trained in methods of store-keeping, he is not so well suited to the position as a person who has had that advantage. The Superintendent of Stores should be responsible not only for the proper issue of stores but for their proper custody in the main and minor depôts; and he, and not the Director of Construction, should be required to inspect them. We consider also that the present system of Store Branch estimates, with the divided responsibility for expenditure on works thereby entailed, is very unsatisfactory.

The functions of the Store Branch should be confined to the receipt, custody, and issue of stores, and the entire responsibility for seeing that the stores asked for are needed and suitable for the work should rest with the Divisional Superintendent or Circle Officer. It should be the duty of Divisional Superintendents to complete the estimates in respect of the value of the stores needed, and the Store Branch should not be required to watch that indenting officers do not indent for more than the estimates provide. The indent should be the Store-keeper's authority to supply, and the responsibility of seeing that the indent is in accordance with the estimate should lie with the indenting officer.

Principal recommendations of the Committee relating to stores.

121. (i) We recommend therefore that the present practice of employing a Telegraph Engineer as Superintendent of Stores should cease; and that an officer trained in store work, as are store-keepers on railways, should be appointed Chief Store-keeper to the Department. This officer should be in general charge of the whole Store Branch and in immediate charge of the Calcutta depôt. He should be responsible for the entire receipt, custody, and issue of stores throughout the Branch, and should be required to make annual inspections of the main depôts under him, with reference particularly to the rates of local purchase and labour as well as to the general arrangement of stores. It should be his duty, in consultation with the Director of Construction and Circle officers, to frame the annual indents on England, and to arrange for the supply direct to depôts of the stores from England required in the Divisions which the depôts are appointed to serve. He should also give forecasts to the workshops of the stores likely to be required by each depôt, and arrange in accordance with departmental instructions for the local manufacture and purchase of stores.

(ii) The main depôts at Madras, Bombay, and Karachi and the agency at Rangoon should be extended in scope and as far as practicable made self-contained and able to supply all stores usually required. This condition does not, however, apply to instruments, which should be kept in the Calcutta Depôt only. The system now in force at Karachi should be continued; and the depôts at Madras, Bombay, and Rangoon should, as is now the case at the first two places, be in charge of Sub-Assistant Superintendents. We consider this arrangement preferable to the recruitment of men specially for the Store Branch, because by reserving these appointments for Sub-Assistant Superintendents the Department will have a considerable number of men of some service and standing to select from, and there will be no difficulty in removing a Store-keeper who works unsatisfactorily. A further advantage is that the men recruited will already be acquainted with the different kinds of telegraph stores. It is essential, however, that the appointments should not be given to men who are near the end of their service.

Other recommendations. Allotment of areas to main depôts.

122. To each of the main depôts defined areas of country should be allotted and the depôts should be able to supply practically all the stores required in the areas which they are appointed to serve. The actual apportionment of the several charges will depend on the Circles and Divisions created, and should be made by the Director-General after reference to Circle Officers and the Chief Store-keeper, the principle to be borne in mind, in fixing generally or in particular cases the depôts on which Divisional Superintendents should indent, being that stores should be supplied from the depôt which involves the least

expenditure in freight. When the new system is introduced Divisional Superintendents or other officers requiring stores (excluding instruments) should be instructed to indent direct on the depôt to which their charge has been apportioned; and it should be the duty of the Store-keeper in charge of the depôt to supply them, referring to the Chief Store-keeper only when he has not the stores in his own depôt.

Sub-depôts.

123. We recognise that in addition to these main depôts certain sub-depôts or store agencies will be required. Some are needed for military purposes, but the majority will provide for stores returned from re-constructions, and their number and the localities where they must be situated will vary according to the amount of re-construction done and the speed at which the second-hand stores are re-issued. These sub-depôts should continue to be in charge of the Telegraph Masters of the offices where they are located, additional clerical assistance being afforded where the work would otherwise interfere unduly with the regular duties of the Telegraph Master. They should be subordinate to the main depôt to which the area is apportioned, and the Telegraph Master in charge should be instructed to report to the main depôt all receipts and issues of stores. It should be the duty of the Store-keeper in charge of the main depôt to arrange for the issue as quickly as possible of all stores at these sub-depôts, and he should incorporate in his books and returns all particulars of the stores lying at them, copies of the periodical balance returns of stores being, however, sent direct to the Chief Store-keeper, to enable him to watch the progress made in re-issuing the second-hand material.

Valued and Numerical Accounts of Stores.

124. (i) In the matter of accounts, we consider that the *valued* accounts of stores should be kept by the Examiner, the Store Branch maintaining, as now, *numerical* accounts only. The present system of sending estimates to the Store Branch for the insertion of particulars relating to stores should cease, and Divisional Superintendents and other officers framing estimates should be required to fill in these particulars themselves from the Rate Lists, calculating freight charges from the depôt on which they are instructed to indent. This change should set free some clerks now employed in the office of the Superintendent of Stores, and effect a small saving in clerical charges.

(ii) Further we consider that the Divisional Superintendent should maintain a complete record of the expenditure against his estimates, and be responsible for the total outlay on the works entrusted to him to execute. For this purpose the Examiner should furnish him with monthly statements showing the values of the stores supplied with such other particulars as will enable the Divisional Superintendent to identify the stores, and to know the works to which they are issued. Freight charges, when not paid by the Divisional Superintendent, should be advised either by the Store-keeper or by the Examiner, as may prove the more convenient.

Code words for store articles.

125. It would probably be useful to give Code words to the principal articles in stores. We have received evidence on this point, and there were opinions to the contrary effect, and we understand also that the Department has considered the matter and thought a Stores Code unnecessary. We have decided, however, to make the suggestion, though we do not attach much importance to it.

Financial effect of the proposals of the Committee relating to stores.

126. As regards establishment, the effect of this part of our proposal is shown in the statement below.* The pay of the Chief Store-keeper will be slightly less than the pay of a Telegraph Superintendent, and instead of three Sub-Assistant Superintendents, two Telegraph Masters, and one signaller, we propose four Sub-Assistant Superintendents. The cost of our proposals will be somewhat below the existing cost, and in addition there will be a saving in the clerical establishment of the office of the Superintendent of Stores, estimated at Rs. 500 a month, partly counterbalanced by an additional expenditure of about Rs. 200 a month in the Examiner's office to meet the cost of the extra establishment that will be required to prepare the monthly statements of stores to be sent to Divisional Superintendents. We estimate that our proposals on the whole will effect a saving of about Rs. 600 a month.

Decentralisation in large cities.

127. (i) The last point referred to us by the Government of India in the Resolution of September last is thus stated :—

(12) *Whether it is advisable to decentralise the work of the Department to a larger extent in great cities.*

(ii) We have found it impossible to lay down any broad principles on the subject of decentralising work in large cities, as the circumstances of each city and of each office in each city would have to be examined periodically to ascertain to what extent measures in this direction are desirable and can be made without undue expenditure. The main object to be kept in view is expedition in the delivery of messages to the public, and this object will not always be best secured by decentralisation. At an outlying office with light traffic only one or two delivery peons may be needed for the work to be done; and if a message comes to such an office when the peons are absent, it may reach the addressee later than if it had been sent out from the Central Office where there is a large staff of peons always ready to take out messages. At present the general practice in large towns is to deliver all messages from one Central Office, bicycles and tramways being used by the messengers to expedite their work. The Department has recognised the advantages of these quick methods of locomotion and will no doubt make an extended use of them as traffic demands.

(iii) In the very large cities it might be possible to mark out delivery areas and to select particular outlying offices to serve them, thus avoiding the necessity of delivering all messages from the Central Office; and we think that Mount Road, Madras, and Malabar Hill, Bombay, are suitable offices for

Present.		Proposed.*	
Superintendent of Stores.	Grade pay Rs. 850 or 1,000	1 Chief Store-keeper . . .	Rs. 600—40—800
Presidency house-rent and allowance.		Presidency house-rent and allowance of a Superintendent of Telegraphs.	
1 Sub-Assistant Superintendent, Calcutta.	} graded pay.	1 Sub-Assistant Superintendent	} graded pay.
1 Telegraph Master, Calcutta . . .			
1 Signaller, Calcutta . . .			
1 Sub-Assistant Superintendent, Bombay.		1 Sub-Assistant Superintendent	
1 Sub-Assistant Superintendent, Madras.		1 Sub-Assistant Superintendent	
1 Telegraph Master, Rangoon . . .		1 Sub-Assistant Superintendent	

trying this system. The question of expenditure is an important consideration in this connection as extra signallers would be required in such delivery offices and probably it would be found impossible to reduce the number of delivery peons in the Central Office by the number appointed in the branch office. The question is one that must be decided after careful local inquiries and experiment, and the local Telegraph officers in the places mentioned might be instructed to make such inquiries with a view to determining whether decentralisation to the extent suggested can be justified.

(iv) The local traffic between offices in the same town is as yet insignificant in this country; but in all large cities there are many outlying offices, and the best way of dealing with messages booked at these offices is a matter of much importance requiring careful examination. The present rule, which appears to be quite suitable, is that where there is a wire between the outlying office and the Central Office, Urgent, and in some cases Ordinary, messages are signalled to the Central Office where they are dealt with as transit messages. All other messages are taken by messengers at fixed times to the head office. In some of the places visited by the Committee these messengers have bicycles, and we consider that, where there is a fair amount of traffic, bicycles should be used freely.

(v) We understand that telephones have been tried for despatching messages to the head office, but given up as unsatisfactory owing to the number of errors that occurred. As, however, the use of telephones has become much more common since the experiment was made, and persons of all classes are now becoming habituated to their use, we consider that a fresh trial of the telephone system for the despatch of messages to the Central Office should be made in a few of the larger towns. Pneumatic tubes are not yet required in India for purely telegraphic purposes, but where postal traffic is heavy between two town offices and the Postal Department is prepared to make use of the tubes and bear a part of the cost, it might be found practicable to instal them.

Powers of the Director-General in regard to the leave of officers.

128. We have been asked* to consider whether any extension of the powers delegated to the Director-General under item 3, Appendix 1 of the Civil Service Regulations with respect to the grant of leave to officers of the Telegraph Department is desirable; and in what cases the previous sanction of the Government of India to acting promotions in leave vacancies should be obtained. Our answer to this question is contained in items 18 and 65 of the schedule in Appendix E. We consider that the Director-General should have full power with respect to the grant of leave and the making of acting promotions in the case of all officers of the Department of lower rank than Directors.

Automatic increase of Accounts establishments.

129. (i) The Government of India* have inquired whether a scheme can be devised for the automatic increase of the accounts establishment in proportion to the actual increase in traffic. An examination of the figures of establishment employed in the office of the Examiner of Telegraph Accounts shows that in 1896 the number of accountants and clerks employed in the office was 114 and the aggregate of expenditure audited Rs. 79,45,880. In 1906 the corresponding figures were 141 and Rs. 1,46,92,889, or in other words an increase in establishment of 24 per cent. was sufficient to audit an increase of expenditure of 85 per

* Memorandum of the Government of India in the Department of Commerce and Industry, No. 8011-88, dated 10th October 1906.

cent. showing that no direct proportion between the two is possible. The Check Office, which audits the revenue of the Telegraph Department, corresponds to the traffic audit offices on railways, and we understand that officers experienced in railway audit work have found that in the case of their offices it is not necessary to increase the establishment in proportion to the amount of the receipts, or practicable to act on the assumption that additions to the establishment should be in a direct ratio to the growth of traffic. For these reasons we are of opinion that no scheme can be framed for the automatic expansion of audit establishments.

(ii) The accounts offices of the Telegraph Department as forming part of the Public Works Accounts Branch are under the Accountant-General, Public Works Department, and under existing orders that officer has to be satisfied of the necessity of any increase before such is sanctioned. We recommend the continuance of this procedure which has worked well in the past and proved conducive to economy.

Leave and acting promotions to Superior Accounts Officers and revisions of the office establishment of the Examiner of Telegraph Accounts.

150. (i) Another matter on which Government * have requested our advice is whether any change is desirable in the present arrangements under which the sanctioning authority for the grant of leave and acting promotion to superior Accounts Officers is the Public Works Department, while revisions of the office establishment of the Examiner of Telegraph Accounts are referred to the Department of Commerce and Industry.

(ii) Prior to the formation of the Department of Commerce and Industry, the Public Works Department was responsible for the administration of the Telegraph Department, and both the matters mentioned above were referred to that Department. But when the Department of Commerce and Industry was formed and the control of Railways and Telegraphs transferred to it, no division was made of the Accounts Branch of the Public Works Department, with the result that the officers of this Branch, as Examiners of Railway and Telegraph Accounts, are under the control of the Department of Commerce and Industry, and as Examiners of Roads and Buildings and Irrigation Accounts under the Public Works Department. The Branch, however, remains one under one head, with its officers liable to transfer from one class of work to the other, and so long as this arrangement continues, we consider that all orders affecting the members of the Branch should issue from one Department of Government only, though the other Department should be consulted if it so desires. The Accountant-General, Public Works Department, as the head of the Branch, is also Deputy Secretary in that Department; and it is probably more convenient for the Public Works Department to issue the orders.

(iii) To the revision of the office establishments somewhat different considerations apply. It must be remembered that the cost of the Public Works Audit establishments is charged to the grants to which is debited the expenditure audited by them. In the case of the Telegraph Department the Director-General is responsible for the entire expenditure charged against his grants, and it is only right that he should be consulted before additional expenditure is incurred. The Director-General merely refers to Government such cases as may be beyond his powers of sanction, or where the increased expenditure cannot be met from the grants at his disposal; and as the Department of Commerce and Industry is the controlling Department of Government

* Memorandum of the Government of India in the Department of Commerce and Industry, No. 8011-88, dated 10th October 1906.

for all Telegraph expenditure, such references should be made to that Department. For these reasons we consider that no change in the present procedure is necessary.

Statistics showing the number of words in messages.

131. We have been asked to consider whether the number of words signalled should not be recorded in future in the statistical returns of the Department in place of the number of messages as at present. To record the actual number of words signalled in every message would impose a heavy burden on the Department, and could not be accomplished without the entertainment of additional establishment. But in a matter of this kind exact figures are by no means necessary; it will be quite sufficient if an approximation is arrived at, based on the examination of a percentage of the messages. As explained in paragraph 118 it will be the duty of the Statistical Branch of the Examiner's Office to prepare statistics, based on the traffic of two weeks, one chosen from each half year as being representative of the traffic as a whole, which will show the number of words in the preamble, in the address and in the text of each class of telegram. The figures so obtained can, if it is thought desirable, be substituted for the number of messages in the statistical returns of the Department which are forwarded to the Secretary of State. It will, however, still be necessary for various departmental purposes to maintain statistics of the number of messages. For this also our proposals in regard to the work of the Statistical Branch fully provide.

Complaints made by the clerical establishment of the Department.

132. We have received twelve memorials or petitions from Signal Office clerks, including Booking, Passing, Despatching and Drafts clerks, and eight from Divisional or Sub-Divisional clerks. We have duly considered these representations and have made inquiries regarding the clerical establishment of the Department during the course of our tours. We find that a good deal of discontent exists amongst the clerks, that no regular or general system of promotion has been prescribed for them and that, in many cases, the pay is insufficient. In former years when work was done at less pressure, heads of offices could probably dispense with clerical assistance except such as is involved in copying, in maintaining simple registers and in dealing with simple accounts. But with the increase of work and correspondence intelligent and well-trained clerks have become a necessity. The establishment is also affected by the general increase in the cost of living which has taken place in this country within recent years. The Signal Office clerks have no just cause of complaint in their liability to night work or obligation to discharge their duties on holidays, for they have accepted their appointments knowing well that these conditions of work must be obligatory in the Department. At the same time their duties are undoubtedly onerous and they appear to us to deserve consideration.

Proposed conversion of temporary into permanent appointments.

133. A grievance which certainly ought to be redressed is the undue proportion of temporary hands. Where the bottom of a list is weighted with an excessive number of temporary appointments the consequence is an inferior standard of efficiency throughout. Good men will not accept temporary appointments when the chances of confirmation seem uncertain or remote; it is difficult to recruit the permanent establishment otherwise than from the temporary men and thus the whole establishment suffers. In paragraph 18(iv) of this Report we have proposed the extension to the Telegraph Department of the Post Office rule that after the expiry of two years temporary appointments should be either converted into permanent appointments or discontinued. We think

that this rule should be applied in the case of the clerks of the Telegraph Department with effect from the date of the introduction of the Circle scheme or sooner if possible. On application of the rule all temporary clerks, who have been continuously employed for two years or more and whose services were still required, would be at once brought on to the permanent establishment unless, by reason of want of efficiency or any defect in character, they were undeserving of this promotion.

Representations
of clerks
disposed of
elsewhere.

134. Many of the complaints or representations made by the clerks have been sufficiently dealt with in various other parts of this Report. Sub-Divisions will be abolished and their clerical establishments will be absorbed in those of Divisions and Circles. We have proposed in connection with the Circle Scheme (paragraph 15) rates of pay and a system of grading and promotion for Divisional and Circle clerks. We shall make general recommendations in Chapter V regarding (1) Security Deposits (paragraph 161), (2) Fines (paragraph 162) and (3) Sundays and holidays (paragraph 164); and these recommendations extend to clerks. The reasons given in the same Chapter for refraining from any proposal to institute a Provident Fund (paragraph 166) apply, as noted in the proper place, to clerks no less than to signallers. Apart from these particular points the general and important proposal (paragraph 16(v)) that an annual grant shall be made to the Director-General of Telegraphs for improvements in the fixed establishment will give him the needful funds and authority to put the establishment of Signal Office clerks on a better footing. Under that proposal he will have power to revise both the pay and the grading of these clerks.

Discussion of
the report of
the Director-
General of
Telegraphs
upon the
general
memorial of
Signal Office
clerks.

135. (i) Amongst the memorials under consideration three have been forwarded to us by the Government of India in the Department of Commerce and Industry* with the remark that it is presumed that we shall deal with the subject in our Report. Of these memorials one is from the clerks employed in the Bombay Central Office and the local offices of the Bombay Division; one is from the clerks of the Karachi office; and the third and most important memorial purports to be submitted by the Signal Office clerks of the Department generally. On this memorial the Director-General of Telegraphs has made a report; and, as he has observed, the Bombay and Karachi memorials do not call for separate consideration. The subject, so far as it has not been covered by the remarks already offered, will be most conveniently dealt with if we take up in order the points to which Sir Sydney Hutchinson refers and indicate how far we agree with him. Sir Sydney Hutchinson's report † and the general memorial are printed as Appendix N.

(ii) *Prayers Nos. 1, 2, and 4* of the memorial ask that Signal Room clerks may be given the pay and prospects of Local Scale signallers. We concur with Sir Sydney Hutchinson in holding that this request should not be granted. Signallers have special qualifications and have undergone a special training, and their pay and promotion should be determined upon principles which do not apply to clerks. We observe that Sir Sydney Hutchinson admits that "we shall have to employ men of superior intelligence to those now in the service and pay them a good deal better, in the booking, despatching and other branches of our largest offices, if the work is to be done in such a way as to satisfy the public." If the proposed grant for fixed establishment is

* No. 1053-136, dated the 30th January 1907, and No. 1524-136, dated the 15th February 1907.

† Letter from the Director-General of Telegraphs to the Secretary to the Government of India, Department of Commerce and Industry, No. 368-E.T., dated the 15th December 1906.

sanctioned, the Director-General of Telegraphs will be in a position to act upon this view. Overtime, which is incidentally referred to, is dealt with in paragraph 64 of this Report and what is there said applies to Signal Room clerks, who have to work in the same watches with signallers.

(iii) It will not, however, in our opinion, suffice to deal only with the establishments of the Presidency and other large offices. A graded service, when the grades are so arranged as to ensure a reasonable flow of promotion, conduces to efficiency and economy, because an equally good class of men can be obtained at lower rates of pay when part of the attraction is assured prospects. We have applied this principle to the case of the clerks of Circles and Divisions; and we think it should be applied also to the case of Signal Room clerks. In large offices where the numbers would suffice for the purpose of equable promotion, such grading as exists should be examined and the scale revised to suit local requirements with due regard to the rates for clerical labour which may be current in the place. The small Signal Office establishments in Divisions should be brought on one list for the Circle, as we have proposed in the case of Divisional and Circle clerks; and a similar system of grading and promotion should be adopted. The Circle lists for small Signal Offices should, however, be kept quite distinct both from the lists of clerks in Divisional and Circle offices and from the lists of large offices which would be separate in each case. The duties of Signal Office clerks and of ordinary office clerks are essentially different. We are not prepared to make more definite proposals, as we have done for Divisional and Circle offices, partly because rates of pay would vary from large office to large office and in small Signal Offices with the tract of country, but mainly because scales for such offices must be framed after considering the actual wants of each office—a matter involving detailed local inquiry—and because when the improvements in the booking and delivery of messages which we have proposed are brought into force, reduction in the number of Signal Office clerks may prove feasible in many places.* If the views here indicated are approved, Circle Officers should prepare schemes for giving effect to them, with which the Director-General of Telegraphs, in administering the proposed grant for fixed establishment, will have power to deal.

(iv) *Prayer No. 3* relates to the abolition of fines. We have already referred to our opinion on this point. The petition of the clerks, however, does not properly distinguish between Check Office fines and the recovery of uncollected charges. Such recovery should certainly be insisted upon and our recommendations regarding fines do not extend to the wholly distinct matter of undercharges.

(v) *Prayer No. 5.*—We are unable to recommend the reduction of the period of service qualifying for full pension from 30 to 25 years.†

(vi) *Prayers Nos. 6 and 13.*—These prayers refer to transfers to other offices; and the three months' notice required by rule is deprecated. The rule for persons who have deposited security will be found in paragraph 3 of Chapter F of the Telegraph Code. We think the requirement of notice is a proper one; and we have no doubt that the officers of the Department apply the rule considerately and do not insist on the full notice required by the rule except when it is essential to do so in the public interests.

(vii) *Prayer No. 7* is for the transfer of Signal Office clerks to the Signalling Branch in preference to outsiders. Sir Sydney Hutchinson has stated the

* On this point see also paragraphs 138 (i) and 143 (iii) below.

† On this point see also paragraph 165.

present rule, which is that the transfers of clerks to the Signalling Branch is allowed when the men are fit for that Branch and have rendered five years' service. Such transfers are likely to be rare when the passing standard is raised to 23 words per minute. We fully concur in Sir Sydney Hutchinson's remark that a clerical post should not be regarded as a stepping stone to the Signalling Branch. The line between the two establishments should be firmly maintained.

(viii) *Prayer No. 8* is for the conversion of temporary into permanent establishment. We have already dealt with this subject in paragraph 138 above. We note the admission of the Director-General of Telegraphs that without doubt there are too many temporary clerks. This is our opinion also. We entirely dissent from the suggestion of Mr. Maclean that perhaps this class of service should not be pensionable. Pensionary rights are essential if the service is to be intelligent and trustworthy. This is practically acknowledged, we believe, in all Departments. The hold that is given by the prospect of pension is particularly necessary in the case of Signal Office clerks all of whom from the nature of their duties are continually in possession of confidential information. There would be no sufficient security for the privacy of message drafts if the clerical establishment generally were temporarily employed; and we think this consideration gives weight to our advice for the speedy conversion of a great part of the temporary into permanent establishment.

(ix) *Prayer No. 9* is for the grant of house rent. We agree with Sir Sydney Hutchinson that there is no reason to grant house allowances to Signal Office clerks.

(x) *Prayer No. 10* has reference to Sundays and holidays, casual leave and (in a certain sense) overtime. No fresh rules seem to us to be necessary on the subject of casual leave. The other points have been dealt with, but in connection with the plea for overtime on Sundays and holidays we would emphasise what we have already said. Work on Sundays and holidays is a part of the duty of these clerks and can afford no ground for additional remuneration. We have, however, made proposals which will give them some relief.

(xi) *Prayer No. 11* asks for special pay in Presidency offices and allowances to clerks at hill stations. Pay in Presidency offices will be dealt with under clauses (ii) and (iii) of this paragraph, if approved. We do not agree with Sir Sydney Hutchinson that any new hill allowances should be granted to men not locally engaged. We think the correct principle is not to grant allowances in addition to pay, but to fix the pay according to the circumstances of the locality, including the cost of living.

(xii) *Prayer No. 12* is concerned with grants from the Fine Fund or the establishment of a Provident Fund. The latter subject is discussed in the next Chapter. The rules relating to the Fine Fund are in Chapter D, paragraphs 58 to 62 of the Telegraph Code. We do not think that they require alteration. We agree with Sir Sydney Hutchinson that Clerks' clubs, if started, would be eligible for grants.

(xiv) *Prayer No. 14* begs for better medical aid and the grant of free medicine or a medicine allowance. We would refer to the Telegraph Code, Chapter D, paragraphs 41 to 51, which are sufficient. We quite agree with Sir Sydney Hutchinson that medical certificates can be accepted only from gazetted medical officers.

(xv) *Prayer No. 15* is for the grant of commission on telegraph stamps. We do not support this request as we have recommended* elsewhere that the commission on postage stamps should be abolished. Moreover, under the proposals made in the paragraph of this Report quoted in the foot-note, telegraph stamps will no longer be used, postage stamps being utilised for telegrams.

Memorial of
Check Office
clerks.

136. In addition to the memorials already referred to we have received one from the clerks from the Check Office. In that office 267 clerks are employed, of whom 211 are permanent and the rest temporary. These clerks have successfully shown that their average rate of pay is low compared with that given in many other Departments and the grading is no doubt defective as there are 76 men on Rs. 25 to Rs. 30 and 160 on Rs. 30 or less. We have made proposals for the simplification of the work of the Check Office, which should result in some saving of establishment if not counterbalanced by the growth of traffic in the interval. When the Examiner has taken charge of the office and has had time to introduce improvements of system, he should carefully review the pay and position of the clerks and make proposals for grading them, following generally the lines which we have suggested above as applicable to the case of large offices.

* *Vide* paragraph 141 (5).

CHAPTER V.

MATTERS TAKEN UP BY THE COMMITTEE OF THEIR OWN MOTION.

Introductory

137. In the Resolution by which the Committee was constituted it was said, "The Committee are not limited by the terms of the reference to the specific questions indicated but are free to take up any matter connected with the main object of their appointment which is to submit proposals for the improved organisation of the Indian Telegraph Department in all its branches. Any defects in working or suggestions for improvements which may come to their notice should be carefully considered, and so far as necessary, appropriate proposals should be made." Acting on the authority conveyed in these words we have thought it right to make inquiries into a variety of subjects some of which were suggested to us by the Director-General of Telegraphs and others attracted our attention during the course of our tours. A few of them have already been discussed in the three preceding Chapters when they could be most conveniently disposed of in connection with the matters referred to us by Government; and our recommendations regarding the remainder must now be brought forward. Of these the most important are the proposals which we make for the acceleration of work in signal offices and the reduction of the main classes of messages from three to two.

Acceleration of work in signal offices.

138. (i) We consider that the disposal of traffic could be materially expedited by the adoption of a less elaborate method of booking telegrams, and by simplifying generally the mode of dealing with both sent and received telegrams in signal offices. In the first place much time is occupied by the booking clerk in filling in the entries on the telegraph form and on the receipt, and in affixing the double headed stamp and cutting off the receipt portion of the form. The number of telegrams that a smart clerk can book in an hour is, as reported to the Director-General by the Superintendent of the Calcutta office, 22, or about one in three minutes. If the time required for booking is reduced—as we believe is possible—to one minute or less, a considerable reduction in the booking staff of the larger offices could be effected.

(ii) In the second place the procedure which is followed in dealing with the booked telegram, up to the time when it reaches the instrument for despatch, is unnecessarily elaborate especially in the large offices, and needs simplification. This procedure varies in the different offices and no description which would apply to all offices can be given. We consider therefore that it will be of advantage to describe the procedure actually adopted in the Calcutta office in connection with (a) an inland message presented to the booking clerk for despatch, and (b) a message received at the instrument for delivery. This description, we may explain, has been prepared in personal consultation with the Superintendent of that office.

Description of the procedure in the Calcutta office.

139. (i) The booking clerk—after making the prescribed entries on the receipt and on the form—impresses both receipt and form with a stamp consisting of a letter to indicate the clerk who books it and a serial number to indicate the number of telegrams booked by that clerk during his term of duty. He also impresses with an India rubber stamp "X" on Urgent and "D" on Deferred telegrams.

(ii) The booking clerk then enters on a "daily slip"—

- (a) the number of the telegram,
- (b) the class " " "
- (c) the station to,
- (d) the hour and minute of booking.

These "slips" are kept in the booking office for six months.

(iii) The draft telegram is then placed by the booking clerk in a clip, whence it is taken by a peon to a table in the booking room, where a literate peon—

- (1) stamps the draft telegram with a general serial number, and
- (2) enters this number, as well as the booking clerk's distinguishing letter and number, in a "monthly check sheet."

There are separate stamping machines, with separate series of numbers, and separate check sheets for (a) Urgent and Ordinary, and (b) Deferred messages. These monthly check sheets are retained in the booking office.

(iv) The draft telegram is then sent by a tube to the signalling room. A peon at the end of the tube receives the draft and hands it to the passing clerk. The passing clerk notes on the draft the number of the instrument to which it is to be sent, and also enters in a check sheet—

- (a) the serial number of the draft (serial numbers are printed on the check sheet and have only to be ticked off),
- (b) the class of the draft,
- (c) the station to,
- (d) the time of booking,
- (e) the number of the instrument to which the draft is passed.

These "check sheets" consist of loose sheets, and each sheet when full of entries is taken to the checking clerk whose duties are described below. The passing clerk then puts the draft into a pigeon hole whence a boy peon takes it to the instrument indicated, and places it in one of three pigeon holes at that instrument according as the telegram is Urgent, Ordinary or Deferred.

(v) The signaller (besides signalling the message and making the requisite entries on the draft) keeps a "daily local number slip" showing—

- (1) the circuit serial number of the telegram,
- (2) the number of the message,
- (3) the number of words in the message (words are not registered in all offices: they are only registered in Calcutta under a special temporary order).

(vi) The signaller then puts the draft on a file, whence the drafts are removed by a peon every hour and taken to the checking and sorting branch. The signaller's "daily local number slips" are collected at midnight and taken to the "message draft office." Signallers also keep up a log book as required by the Traffic Code. The log book is very rough and the entries very brief.

(vii) In the checking and sorting branch room the drafts are placed on a table where sorting peons divide them into their various classes. Each class is then handed to a checking clerk, who compares the drafts with the signal room passing clerk's check sheet, and impresses each entry in the check sheet with a rubber stamp bearing a letter to indicate the batch to which the checking clerk belongs, and a number to distinguish the clerk. The checking clerk

CHAPTER V.

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then arranges the drafts of the day according to their serial number. It is the checking clerk's duty to report all missing drafts, and search is then made by the missing number assistant.

(viii) The drafts next go to a Telegraph Master in an adjoining room where they remain for three days. After that period the drafts are taken to the message draft room where other clerks again count the drafts and check the serial numbers, to see that no draft is missing. The required entries are then entered in the "sent register", and the drafts are stitched together in bundles of 25 for despatch to the Check Office.

(ix) In the case of a message received for delivery in Calcutta the procedure is that the signaller enters on the message the time of receipt, received local number, number of circuit and his name and on the "received local number slip" the station from;* he then puts the message into a clip from which it is removed by a peon and taken to the stamping table. There another peon impresses it with the office name and date stamp, and it is then passed to a third peon by whom a monthly number is stamped on it by a hand machine.

(x) The message is then transferred to a "received passing" clerk who enters its number in the monthly check sheet. The other particulars entered on this check sheet are the class, station from, date, hour and minute of receipt, and in case the message is to be signalled to another office, the number of the instrument to which it is transferred. When the message has not to be so signalled, this clerk next puts the original and carbon copies of it in an envelope, and drops them into the shoot. The clerk at the bottom of the shoot enters the number of the message in the monthly local number sheet; after every 100 entries this sheet is checked with the signal office check sheet which is dropped down through the shoot after every 100 entries are made.

(xi) The clerk then sends the carbon copy by a peon to the addressing clerk, who writes the number of the message, the class, and the address on a cover, the number of the message and name of the addressee on the receipt, puts the message in the cover, and makes it over to the address checking clerk. This clerk compares the address on the telegram with that on the cover. Then the cover is passed to a peon to be eyeleted, after which it is made over to the lining munshi,† who transfers it to the despatching clerk.

(xii) The latter keeps a check sheet showing the number of the peon to whom the message is given and the number of messages given to him; he also enters on the receipt the time of sending out the peon and the peon's number; and the peon on receiving his batch of messages takes them to the reading munshi who tells him the address on each.

(xiii) The original copies of messages are made over by the clerk at the bottom of the shoot to a checker, who checks the number (after making them into bundles of 100) against the signal room check sheet, and reports to the Telegraph Master on duty if any are missing in the series.

140. This description shows that traffic is greatly delayed by reason of the number of hands through which the messages pass, and that there is expenditure on establishment which could be avoided by introducing a simpler procedure. As we have already stated, the procedure varies from office to office; but the principle of simplifying that procedure, and of reducing the

Defects of the procedure in the Calcutta Office.

* He also enters the number of words, but this is only for special temporary purposes.

†The lining munshi's duty is to group messages together so that several for different addresses in the same neighbourhood may be taken out by one peon.

number of checks and registers, applies to all the larger offices in a greater or less degree. In place of these checks what is required is effective supervision; and we are satisfied that the best means of ensuring such supervision is to relieve Traffic Sub-Assistants and Telegraph Masters of the purely clerical duties which they now have to perform, and which occupy a large portion of their time, and could be carried out equally well by competent clerks. In all the large offices which we visited it was found that much of the time of the Telegraph Master was occupied with duties of a clerical nature which prevented him from moving about and exercising that personal and constant supervision over the signallers and circuits, which is absolutely essential to the proper and prompt disposal of traffic. We understand that in the United Kingdom it is an accepted principle that supervising officers should everywhere be encouraged to feel that it is on the floor of the instrument room, and not at the writing desk, that they can render the most valuable service to the Department. We consider that this principle is equally applicable to the Telegraph Department of this country.

Recommendations of the Committee for the improvement of the procedure in signal offices.

141. To expedite the booking, transmission and delivery of traffic and to reduce the amount of clerical work in signal offices we recommend the adoption of the following proposals:—

- (1) The booking clerk should not be required to enter either in the receipt portion of the telegraph form the "class" or the "office to", or in the body of the telegram the "class" (in Code), the "office to" or the "office from." These entries should be made by the sender, the class being signalled in Code.
- (2) The booking clerk should not be required to enter the abbreviated word "defd." in the "official instructions" of a Deferred telegram. The Code prefix of the message gives the class and it is unnecessary to signal the class twice over.

In support of this recommendation we would point out that in 1905-06 there were 7,491,826 Deferred messages, and that the average number of operations per message was 4.84. We consider that the saving of 7,491,826 multiplied by 4.84 (or 36,260,437) signalling operations of the abbreviated word "defd." in the official instructions of Deferred messages far outweighs the disadvantage that would occasionally result from having a Deferred message treated as Urgent owing to the Code class letter "D" being accidentally changed to "X" during transmission.

- (3) For the purpose of distinguishing between the two classes of telegrams the booking clerk should stamp "O" on Ordinary instead of "D" on Deferred telegrams. This would save 80 per cent. of the stamping now done.
- (4) On a somewhat similar principle we recommend that the letter "P" signifying "private" should not be signalled in the case of private messages. By this simple expedient a mass of signalling work, which in the aggregate is very large, will be saved. The prefixes to be signalled, if this proposal is adopted, will be X, O, and D, instead of XP, P, and DP as at present.
- (5) Double-headed telegraph stamps should be replaced by postage stamps. This measure will necessitate the printing of postage stamps of high denominations, and the abolition of commission on the sale of such stamps. We have ascertained that there would probably be a small saving in manufacturing charges in consequence of this change, while as regards the abolition of

commission the Telegraph Department at present has to pay over Rs. 40,000 commission on postage stamps used in combined offices and the sum is increasing year by year. As there is at the present time in India a stock of telegraph stamps which will last about three years, it would seem desirable to order out no further supplies until this question is decided.

- (6) Telegraph forms should be perforated just below the receipt portion of the telegram, so that the receipt can be easily detached. The cost of the telegram should be entered on the receipt portion of the telegram by the booking clerk, as is done in the case of telegrams booked at combined offices.

NOTE—A specimen form, embodying the above proposals, is printed in Appendix O. It is recommended that the forms be printed in two colours in order to show clearly the entries which should be filled in by the sender. It has been ascertained from the Superintendent, Government Printing, India, that the additional cost of printing in two colours would be approximately Rs. 2 per 100,000 forms.

- (7) Senders should be encouraged, and ultimately required, to affix stamps to telegrams presented for despatch.
- (8) A deposit system should be introduced for the benefit of persons and firms who have large dealings with the Department, and who are prepared to deposit substantial sums. The grant of this concession should be at the discretion of the Director-General who would see that the rules are so worked that undue extra work is not imposed on the Department.
- (9) Endeavours should be made to obtain a stamping machine which can number and date the receipt portion of a telegraph form, and number, date and deface the stamps on the other portion of the form at one operation.
- (10) The number of booking counters should be increased in important offices.
- (11) The booking clerk's "daily slip" and the "monthly check sheet," kept by the literate peon who despatches the drafts from the booking room to the signalling room, should be abolished.

It will be seen from the description already given that these two registers are not checked by any one. We have been informed that these registers are considered useful in tracing missing drafts; but we fail to see of what practical assistance they can be in such cases. The registers cannot prevent fraud; for the booking clerk or the stamping peon can still make away with a message after registering it, and point to his register as a proof that he is not the culprit. Nor can these registers enable a lost message to be replaced as neither register gives the sender's name or address. The real checks on fraud are (1) adequate supervision, and (2) the danger of complaint by the sender if a message is not delivered. In offices in which for any reason special measures are found to be required, special checks can be prescribed; but such checks should not be retained longer than is really necessary, or be extended to offices where they are not needed. The main check against losses by carelessness or by accident is the serial numbering of drafts.

- (12) The passing clerk's "check sheet" is unduly elaborate. We recommend the omission from this check sheet of (1) the class of draft, and (2) the time of booking. The entry of "the serial number of the telegram," "the station to" and of the "instrument to" seems sufficient.

- (13) In the signaller's "daily local number slip" the circuit serial numbers should be printed, as in the case of the passing clerk's check sheet.
- (14) As drafts are checked and counted in the checking room, the second counting and checking in the message draft room seems unnecessary.
- (15) The registers now sent to the Check Office should be simplified as proposed in a separate part of this Report.*
- (16) The name of the addressee should be omitted from the receipt for a telegram sent out for delivery.
- (17) Greater care is needed in designing buildings for telegraph offices so as to have the signal office near the booking room, and also to leave room for future enlargements.

In many offices which the Committee visited it is a matter of great difficulty, owing to the incommodious character of the buildings, to supervise the establishment and to ensure that traffic is disposed of promptly.

- (18) We recommend that for telegrams with *non-abbreviated addresses* a trial be made of the substitution of transparent envelopes for those now in use—the telegram being so folded that only the name and address of the addressee can be read—with a view to ascertaining whether their use will expedite the delivery of messages. We have been informed by the Superintendent of Government Printing, India, that envelopes of transparent parchment would cost Rs. 13-8 less per 100,000 than those of red demy paper now in use.

A specimen of a transparent envelope will be found in the pocket of the Volume of Appendices, and specimens of a revised "received telegram" form, and of a revised form of receipt for a telegram, in Appendix O.

In connection with the above proposals we would invite attention to Mr. Berrington's recent Report on British Post Office Telegraph Traffic Methods. We are gratified to find that in several important respects the recommendations which we have made, and which are the result of independent inquiries, are in substantial accord with Mr. Berrington's views.

possibility
of laying down
an automatic
scale for the
purpose of
reducing the
number of
booking and
addressing
clerks.

142. (i) In connection with the procedure in signal offices we have investigated the possibility of laying down an automatic scale for the entertainment of booking and addressing clerks in accordance with the actual number of messages booked in, and delivered from, each office.

(ii) As regards both classes of clerks, we are of opinion that no scale can be laid down which would be applicable to more than a few offices, because messages are not received continuously throughout the day either on the wires or by the booking establishment, but are much more numerous at certain hours than at others. It is necessary therefore to provide a staff sufficient to deal promptly not only with the average work of the whole day, but with the maximum outturn of the busiest period. It is possible, moreover, that the use of transparent envelopes may obviate the necessity for writing the addresses of telegrams except in the case of abbreviated addresses.

(iii) As regards the booking clerks, we have obtained figures from the Director-General of Telegraphs showing the average number of messages booked by each clerk in seven of the largest offices, but we think that it would not be safe to fix any automatic scale on the basis of the work done at present. It is hoped that the modifications which we propose in the procedure for

* See paragraph 116.

booking messages will materially reduce the average time occupied in booking each message, and, if so, a staff calculated on the basis of the results hitherto attained would be excessive. We consider that it may be left to the Director-General of Telegraphs to provide such additional clerical establishment as may, from time to time, be necessary from the grant which it is proposed to place at his disposal for fixed permanent establishment.

Automatic Apparatus.

143. We have dealt fully with the reform of the procedure in signal offices as a means of accelerating the disposal of traffic, but our remarks would be incomplete if we did not refer to certain other expedients for attaining the same end. We have been much impressed with the great usefulness of two types of Automatic Signalling Apparatus which are used by the Telegraph Department.

Wheatstone Automatic Apparatus.

144. The first of these—the Wheatstone's automatic system—is most useful when from any cause there are heavy accumulations of traffic, especially when there has been a prolonged interruption, and also when long press messages are received. It is particularly valuable when the weekly mail telegrams come in, because a large proportion of them are sent out from England ready punched on auto-tape, and have only to be put through a transmitter. If ordinary translation at an intermediate station cannot from any cause be properly worked between two distant stations, punched tape in auto-signals can be produced at the intermediate station by the use of "Creed's Perforator." The tape then has merely to be put through a transmitter, instead of having to be repunched before the messages can be sent on to their destinations.

The Baudot Apparatus.

145. (i) The Baudot is an instrument recently introduced which enables a much larger amount of traffic to be disposed of than by Morse. We have been informed that in recent trials the Baudot working duplex disposed of 3,444 words in two hours against 1,335 words on Morse duplex in the same period of time. This instrument eliminates all chance of mistakes between the sending and receiving signallers, as the sending signaller alone deals with the message, his signals being type-printed on tape at the receiving instrument. Further, two messages can be sent in one direction, or one each way, at the same time. All such apparatus, however, require very special care and a sufficient staff of skilled technical men with mechanical knowledge to adjust and keep them in thorough working order.

(ii) The policy of the Department is to extend the use of these instruments to all circuits where they can be employed with advantage and more sets have been ordered out from England; but the evidence which we have received points to the lack of an organised Technical Branch in the Department, without which the full working value of these instruments cannot be obtained. This most pressing want of a special Technical Branch will be met by proposals we have made elsewhere.*

Type-writers.

146. Another important matter to which we would draw attention is the use of type-writers. In a report on Telegraphy in America† Mr. Shields has brought to notice the almost universal use of them in that country and the high speed attained; the Telegraph Department in India has already commenced to use them, and a large number of an improved description have already been ordered and will shortly be introduced. We consider that this more extended use of type-writers will be a great advantage, and we have recommended

* See paragraphs 24—29 of the Report.

† *Vide* Appendix to the letter from the Director-General of Telegraphs to the Government of India in the Department of Commerce and Industry, No. 143-T., dated 31st July 1907.

elsewhere * that sufficient inducements should be offered to signallers to make themselves proficient in type-writing.

Two classes of messages.

147. (i) The last proposal we have to make for expediting the disposal of traffic is perhaps the most important of all. We have been much impressed by the difficulties with which the Telegraph Department has to contend in dealing with messages owing to the existence of three classes of telegrams, *viz.*, Urgent, Ordinary, and Deferred. The operation of booking, despatching and delivering messages according to their order of precedence necessitates the employment of extra establishment, interferes with the prompt handling of traffic of all classes, both sent and received, and, in particular, subjects Deferred messages to much delay which could be avoided if the number of classes were reduced to two. The inconvenience is felt most acutely in the large offices where the necessity for dealing promptly with traffic is greatest; and, with the steady expansion of the business of the Department, it will be impossible to secure a really efficient and expeditious telegraph service so long as the existing classification is maintained. We therefore recommend strongly that there should be only two classes of messages; and as the designation Deferred is undesirable and inappropriate, we propose that the two classes should be termed Urgent and Ordinary, the present Deferred rates being maintained for the class designated Ordinary.

(ii) The present rate for Inland Deferred telegrams came into force so recently as 1st July 1905. This class of message has proved very popular, and in 1905-06 it accounted for over 80 per cent. of the total private traffic. We consider, therefore, that no alteration in this scale is at present feasible. It is also impossible for financial reasons to lower the rate for Urgent to that for Ordinary telegrams. The value of the Urgent state and private telegrams despatched in 1905-06 was Rs. 4,58,337 and Rs. 9,52,854, respectively. As the Urgent rate is exactly double that of the Ordinary, the financial effect of the reduction of the former rate by half would have been (in even thousands) a loss of Rs. 2,29,000 under "state" and of Rs. 4,76,000 under "private" messages in that year; and no expansion of traffic from this reduction of the rate can be anticipated. For financial reasons therefore it is not advisable to effect the reduction of classes to two by simply abolishing the Urgent telegram.

(iii) In recommending for administrative reasons that there should be no more than two classes, we have to consider not only the financial interest of the Government, but also the convenience of the public. When the Deferred telegram was first introduced there were grounds for expecting that in time the Ordinary telegram would disappear. This expectation has not, however, been realised. It is true that, taking "private" traffic only, the percentage of Ordinary messages fell from 21.44 in 1903-04 to 14.47 in 1905-06, and the percentage of value from 31 to 26.51; but the fact remains that the number of Ordinary private messages sent in 1905-06 was (in even thousands) 1,223,000 and the value Rs. 13,74,000. These figures show clearly, in our opinion, that a considerable section of the public wants, and is prepared to pay for, something better than a Deferred telegram, although it is not willing to pay the high minimum charge of Rs. 2 for an Urgent message. It seems to us that the interests of this section of the public deserve consideration.

(iv) It is impossible to estimate with any approach to accuracy the financial effect of merely abolishing the Ordinary class. We cannot say what proportion

* See paragraphs 56—57 of the Report.

of the messages now sent Ordinary would be sent Urgent; and as we do not know the average number of words in an Ordinary message, we cannot say what the loss would be if all were sent Deferred. The average value of an Ordinary message in 1905-06 was Rs. 1.12, which corresponds to an average length of 17 words. But this calculation assumes that no message consisted of less than 16 words—the maximum allowed for Re. 1. If, as a rough estimate, the actual average be taken to be 14 words, the cost of which would be 8 annas at the Deferred rate, the loss to the revenue from the abolition of the Ordinary class would on private messages have amounted to over 7½ lakhs of rupees in that year assuming that all Ordinary messages were sent Deferred and to about 3½ lakhs if 80 per cent. were sent by this class and 20 per cent. as Urgent.

(v) These considerations have led us to the conclusion that the best course—both in the interests of the Government and of the public—is to adopt the ten word unit, now fixed for Deferred messages, for the Urgent class, and to fix the minimum charge for this unit at Re. 1 with two annas extra for every additional word.

(vi) In Appendix P we have made an attempt to estimate the financial results of the above proposal: but these estimates are necessarily based on assumptions. We are confident, however, that the loss of revenue which the acceptance of our proposals would involve would be less than the loss that would be caused by the simple abolition of the Ordinary or Urgent telegram; we believe also that the adoption of a lower minimum rate for the Urgent class will be appreciated by the public and tend to attract a very large proportion of the present Ordinary telegrams to that class.

(vii) An incidental advantage which would result from the adoption of the proposed scale is that it would remove the present anomaly—on which the various Chambers of Commerce have laid great stress—of charging 4 annas for every word above the unit of 16 in an Urgent message. At present where the number of additional words exceeds eight it is cheaper for the sender to split up his message into two or more telegrams and we are informed that this is constantly done. Now with every message that is sent along the wires a preamble, consisting of several words and groups of figures, has to be signalled and for this preamble no payment is made. It is thus to the interests of the Department to send one long message rather than two shorter messages of the same aggregate length. The present rate therefore cannot be justified by any sound commercial principle.

(viii) It may be objected that our proposed rate of 2 annas for each additional word simply substitutes one anomaly for another, as the charge for the first 10 words will be the same as that for 8 additional words. But this argument overlooks the fact that the first 10 words must include the name and address of the addressee. For this entry, even in the case of registered addresses, at least two words are required. The cost therefore of every additional word cannot, at the rate which we propose, exceed, and may be less than, the cost of each word in the text of the telegram, excluding the address. This is as it should be. Long telegrams pay the Department better than short ones; and there will be no inducement to split up messages.

(ix) The same anomaly exists in the case of the present Deferred telegram. The charge of 1 anna for every additional word over 10 is, we presume, a survival from the time when the address was free and the unit of charge

was 4 annas for four words. According to the principle which we have advocated above the charge for each additional word should now be half an anna only or, as would be preferable, one anna for every two additional words. But the minimum charge for this class of message is so low, and the loss to the revenue from a further reduction of rates would be so great, that we recognise that it may be impossible for financial reasons to make this revision for some time. When, however, this final reduction is carried out, the rates for both classes of messages will be as simple and as uniform as is practicable with a ten-word unit.

Telegraphic
advice of
delivery.

148. (i) As we are dealing with the question of rates, we may refer here to a minor defect which ought, in our opinion, to be corrected. The sender of an Inland telegram can, under the existing rules,* receive a telegraphic advice of the delivery of the telegram on payment of a fee of one rupee. We have ascertained that such telegraphic advices are very rarely asked for. A booking clerk in one of the largest offices in the country stated that during the two years of his service in the office he had never once known of such a case. We believe that this may be due to the disproportionate charge which is at present levied, and we recommend that the charge for a telegraphic advice of delivery should be fixed at the unit charge of a message of the same class as that of the message for which the telegraphic advice of delivery is required.

(ii) It may be mentioned that in the United Kingdom the fee for this service is an additional rate for 5 words or 2½d.

Railway
Telegraphs.

149. At one of the earlier meetings of the Committee in Simla the Director-General of Telegraphs † suggested that the relations of the Telegraph Department with Railway Administrations should be inquired into by the Committee, particularly in connection with the ownership and maintenance of telegraph instruments and wires and the necessity for improving the efficiency of Railway signallers. This suggestion was adopted and a set of questions was framed, ‡ copies of which were sent to all the principal Railway Administrations in India. Answers were received in writing from all; and in most cases we had also the advantage of meeting a representative of the Railway and discussing each subject with him.

Ownership and
Maintenance of
Railway
Telegraph
Instruments.

150. (i) As regards telegraph instruments, considerable diversity of practice exists. Some Railways possess and maintain their own instruments; in the case of others the instruments are the property of the Government Telegraph Department, which arranges for their upkeep and technical supervision, while several Railways are gradually replacing the Government instruments by their own. Preference has been expressed by more than one witness for the system of Railway ownership and management, and, as the introduction of electrical block signalling instruments will necessitate the employment of a technical staff on every Railway, it is probable that this system will extend rapidly as time goes on.

(ii) Under existing orders § it is optional for any Railway either to provide and maintain its own instruments, or to rent them from the Telegraph

* *Vide* Rules 105-109 of the Telegraph Guide.

† *Vide* page 53 of Part I of the Proceedings of the Committee.

‡ See Appendix B.

§ *Vide* Resolution of the Government of India in the Public Works Department, No. 53-T., dated 23rd February 1887.

Department. We understand that this rule applies equally to State and Company Railways, and we think that it fully meets all requirements.

Ownership and maintenance of Railway Telegraph Wires.

151. As regards the ownership and maintenance of Railway Telegraph wires, we do not find any reason for recommending a change in the existing arrangements. We have not touched in any way on the question of the charges at present made to Railways for the wires provided by the Telegraph Department, a matter which we understand is separately under the consideration of a Sub-Committee of the Railway Conference.

Defects in the arrangements for the disposal of paid public traffic by Railway Telegraph systems.

152. (i) Complaints of the inefficiency of the service provided by Railway Telegraph systems for paid public traffic have been addressed to us in a number of places. Adequate grounds appear to us to exist in many cases for the dissatisfaction that is felt, and this would probably be admitted by the Railway officers themselves. To some extent the inferiority of the Railway service is inevitable, and cannot be completely removed. Railway wires are erected primarily for the proper disposal of the Railway traffic, and over these wires Railway messages have, in practice, precedence over all others. Private messages, therefore, must always be subject to some and occasionally to serious delay, *e.g.*, when an accident occurs and a number of Railway messages have to be sent in connection with it. Messages handed in at small way-side stations are also inevitably retarded in reaching their destination. At such stations the traffic does not justify the employment of whole-time signallers, and the telegraph work has to be done by the Station Master or Assistant Station Master, who have many other duties to attend to; and when the message is despatched, it may have to be repeated from station to station by the train wire until it reaches a station on a through wire.

(ii) While admitting, however, that some of the difficulties are inherent in the system, we consider that any Administration, which accepts paid messages from the public, is under an obligation to make reasonable arrangements for the prompt conveyance of such messages over its wires. The avoidable delays which at present occur in connection with private messages on Railway wires are due mainly to the low qualifications of Railway signallers and the want of adequate supervision of message traffic. For purely Railway work a high rate of signalling is not essential, and the natural result is that Railway signallers are not usually required to pass by any high standard, nor is their pay sufficient to attract a well-educated or intelligent stamp of man. Few posts carrying more than a very moderate salary are open to signallers as such, and the best men naturally pass into other branches of the Railway service where better prospects lie before them.

Recommendations of the Committee for the improvement of the Railway Telegraph Service.

153. (i) We believe that a considerable improvement may be gradually effected by extending the period of training, by raising the standard by which signallers pass and by offering improved rates of pay. Much has already been done by several Railway Administrations on these lines, and more may reasonably be expected. The test by which Railway signallers are required to pass under paragraph 34, Chapter J of the Telegraph Code, is only 12 words per minute in sending and 10 words in receiving. This standard, we consider, is too low and should be raised. Where possible and where there is appreciable public traffic, we think that the standard might well be raised to 16 words both in sending and receiving, and we recommend that the necessity for this change should be urged on the Railway authorities. As regards supervision, we think that Railways should take all reasonable measures to ensure that paid public

telegraph traffic is dealt with as expeditiously as possible, and might well consider whether a class of inspecting officials should not be entertained specially for this duty.

(ii) The public traffic can also be expedited by the provision of additional transfer offices, by which private messages can be transferred to the Government wires at an earlier stage, and thus conveyed more speedily to their destinations. We recommend that the number of such offices on each Railway system should be reviewed by the Director-General, and new offices provided where the circumstances appear to call for such a measure. We also recommend that combined offices should be opened at or near Railway stations from which a considerable number of public messages are despatched. In a few cases combined offices have, with the consent of the Railway authorities, been opened on the platform itself; and though we recognise that there may be objections to this arrangement, if frequent, we are nevertheless of opinion that offices may usefully be opened on platforms where the Railway authorities concur. We consider, however, that the right of the Telegraph Department to open a combined office close to, but outside the Railway premises, wherever the public traffic justifies this measure, should be clearly recognised; and that the fact that message revenue will thereby be diverted from the Railway office constitutes no valid objection to this course. We do not anticipate that this position would be seriously disputed by any Railway Administration.

Canal
Telegraphs.

154. At the instance of the Director-General of Telegraphs we have considered the question of the maintenance of Canal telegraph systems by the Telegraph Department and the suitability of the rent charges made for wires and instruments. The evidence which we have taken on this point has invariably indicated that no change in the existing arrangements is required. The Inspector-General of Irrigation, who favoured the Committee with his advice on this subject, reported,* after consultation with the Provincial authorities concerned, that all the Local Governments expressed themselves satisfied with the present arrangements as regards construction, maintenance and working, and had no suggestions to offer for a change in these matters. He recommended, however, at the instance of the Governments of the Punjab and Bombay, that the present scale of charges per mile of line and per instrument might be reduced, if the cost of construction and maintenance admitted of a lower rate, and stated that from his personal knowledge he was aware that the present charges had limited the length of the telegraph lines in many Canal systems. We observe that the whole subject was fully considered by the Government of India in 1897, and that the orders issued in that year were repeated in 1903.† We think that these orders are sufficient and appropriate and should be left unaltered.

Graded
Accountants.

155. (i) The Director-General of Telegraphs suggested ‡ to us the necessity for providing regular Public Works Graded Accountants in the offices of all Divisional Superintendents and in the large signal offices, on the ground that the work had become too heavy for the Head Clerks to perform as the accounts were growing more and more elaborate each year. We questioned the Divisional Superintendents on this point; and though a few held to the opinion that Public Works Graded Accountants were necessary, the majority thought that

* *Vide* Appendix Q.

† Public Works Department Resolution No. 144-T., dated the 12th June 1897, Telegraph Code, Appendix A to Chapter J, and Public Works Department Resolution No. 24-C.W.—T., dated the 14th January 1903.

‡ See Part I of the Proceedings, pages 15 and 69.

this would be a needlessly expensive agency and that trained accounts clerks were all that was wanted.

(ii) With this opinion we agree, and we consider that Public Works Graded Accountants are not required either in the offices of Divisional Superintendents or of Circle Officers or in the large signal offices; more especially if accounts are simplified by the adoption of the measure proposed in the next paragraph. Accounts clerks already form part of the establishment in the offices just mentioned, but from the evidence put before us we are of opinion that some of them are not as well trained as is desirable; this defect and the gradual elaboration of the accounts have brought about the demand for regular Graded Public Works Accountants. The accounts clerks should, as far as practicable, be either trained in or recruited from the staff employed in Examiners' offices, more particularly in the office of the Examiner of Telegraph Accounts.

**Simplification
of Accounts.**

156. (i) It has been represented to us by many officers of the Department that the present system of accounts is unnecessarily elaborate, that an excessive number of certificates is required, and that there has been a tendency for some years past to relieve the Accounts Department at the expense of executive officers by throwing an increasing amount of compilation work on Divisions and Sub-Divisions, with the result that irregularity and objection statements, with the additional correspondence involved, are on the increase to the detriment of other work in the Divisional, Sub-Divisional and Examiner's offices.

(ii) Our inquiries satisfy us that these representations are well-founded, and we consider that a simplification of the accounts is desirable which should take the direction of less compilation work in Divisional and Sub-Divisional offices, fewer certificates, destruction in Divisional offices of vouchers for small amounts, and the direct transmission to the audit office of all signal office accounts. The whole system wants thorough examination, and we recommend that an Accounts Officer be deputed to make all possible simplifications in consultation with the executive officers of the Department.

**Training of
Assistant
Superintend-
ents.**

157. (i) Reference must be made in this Chapter to two matters which have a direct and most important bearing on the efficiency of the Gazetted Staff of the Department. Of these the first is the training of Assistant Superintendents for the responsible duties which as Superintendents of Divisions and Directors of Circles they will ultimately have to perform. The effect of some of our proposals will be that officers will hold charge of Divisions at an earlier stage of their service than hitherto, and it is therefore essential that their training should be completed before this stage is reached. The recommendations which we have to make on this subject are—

- (1) That the postings of officers to different Circles during the first five years of their service should be made so as to give them experience of the varied nature of telegraph work in this country.
- (2) That at some time during this period every Assistant Superintendent should be posted for not less than six months to one of the Presidency or other large telegraph offices in order that he may obtain a thorough practical knowledge of traffic.
- (3) That when special works have to be carried out in Circles such as the laying of cables or the erection of masts, facilities should be given by the Circle Officer to officers in his Circle who are experienced in such duties to attend and see what is done.

(4) That Directors should in the course of their tours satisfy themselves that Divisional Superintendents are adequately training their Assistants.

(ii) So much importance do we attach to the training of Assistant Superintendents to fit them for the appointments of Superintendents, that we should have had no hesitation in proposing an addition to the number of Sub-Assistants (General) had we thought this really necessary in order to enable Assistant Superintendents to be temporarily relieved of their ordinary duties in Divisions for special training in telegraph offices or otherwise, as above proposed. We are, however, of opinion that any difficulty that may arise can, for some time at any rate, be met by adding to the numbers of Inspecting Telegraph Masters and Sub-Inspectors, 1st grade, and that no increase to the number of Sub-Assistants should be made until experience shows it to be indispensable.

Study Leave.

158. The second matter to which we desire to refer here is the grant of study leave to the Superior Officers of the Telegraph Department. Rules regulating the grant of such leave are already in force in the case of the Indian Medical Service and the Indian Forest Department, and we understand that the question of adopting such rules in the case of the Telegraph Department has engaged the attention of the Government of India on a representation from the Director-General of Telegraphs urging that the present arrangements had been found inadequate and unsatisfactory. We are of opinion that the Officers of the Department should consider it a part of their duty to keep their professional knowledge up to date, and that the necessary facilities should be afforded to them for the attainment of this object. Should it not be attained, much of the trouble and expense involved in the reorganisation of the Department which we have proposed will be thrown away. This remark applies specially to the officers of the Traffic Branch of which we propose the eventual formation; and to those of the Technical Branch, who must obviously keep abreast of the progress of electrical science. For these reasons we recommend the introduction of liberal rules, so as to enable the gazetted Officers of the Department to study the latest improvements in electrical science and traffic working.

Divisional Line Maintenance and Construction Branch.

159. (i) Our Report would be incomplete were we to omit all reference to one of the chief branches of the subordinate establishment which has not yet been mentioned, except incidentally. The construction and maintenance of the telegraph lines throughout India is carried out, under the supervision of the Officers of the Department, by the subordinate Line Establishment. Linemen are recruited from the labouring classes and are usually employed for some time as coolies, either permanent or temporary, before they are appointed as linemen. The pay they receive varies according to the locality from Rs. 10 to Rs. 20 per month. The Sub-Inspectors are in all cases promoted linemen and are divided into three grades, the rates of pay being—

	Rs.
1st Grade	50—5—80
2nd „	25—3—40
3rd „	25 fixed.

There are 20 Sub-Inspectors in the first grade, 80 in the second, and 229 in the third.

(ii) To each Division is assigned a staff of Sub-Inspectors and linemen which is fixed according to the length of the lines which have to be maintained

and the country they traverse, but no uniform scale has been or can be laid down which would be applicable to every part of the country. A distinction obviously exists between road lines and railway lines, for the number of miles of line which can be efficiently looked after by a single lineman or a single Sub-Inspector must clearly be greater in the case of the latter than in that of the former. Again in the case of railway lines a smaller establishment will suffice where the train service is frequent and the staff can move rapidly from point to point than where the trains are few. As regards road lines, much depends on the nature of the country and the extent to which the line is liable to interruption; and where, as in parts of Burma and Assam, the line passes through tracts of dense jungle remote from human habitation, the staff may have to be specially strengthened. The determination and distribution of the line staff is therefore essentially a local matter on which general rules cannot be laid down.

(iii) The Divisional linemen and Sub-Inspectors are expected to carry out petty construction work in addition to maintenance duties. But they are nowhere sufficient for the execution of important construction works, and in such cases assistance is given from the departmental reserve for construction which is known as the Construction Branch. The Sub-Inspectors and linemen included in this Branch are attached temporarily to the various Divisions according to the importance and nature of the work to be done. The total sanctioned staff permanently posted to Divisions numbers 278 Sub-Inspectors and 1,678 linemen, while the construction reserve consists of 51 Sub-Inspectors and 138 linemen. If an average is struck for the whole country, each Divisional lineman is in charge of 39·8 miles of line while each Sub-Inspector has 240·2 miles of line to supervise, but these figures cannot be relied on as a basis for fixing the staff in any particular Division.

(iv) We have made careful inquiries during our tours as to the adequacy of the existing line establishment in Divisions, its efficiency and the suitability of the rates of pay. There is strong reason to believe that in some places the number of Divisional Sub-Inspectors and linemen is insufficient or barely sufficient for maintenance alone, and that, when construction has had to be done by the Divisional staff, maintenance has suffered. This would indicate that the staff was inadequate were it not for the fact, which is vouched for by a high officer of the Department, that owing to difficulties in recruitment the staff has not been brought up to the strength sanctioned. So long as this state of affairs continues it is impossible to affirm with confidence that the sanctioned, as distinguished from the actual strength is too small. The facts, however, appear to us to warrant a strong presumption that the rates of pay are in some places insufficient to attract suitable men and this defect should be remedied. Another point in the system which appears to require correction is the grading of the Sub-Inspectors which at present is far from satisfactory, the numbers in the first, second and third grades being approximately in the proportions of 2, 8, and 23. We consider it essential that the grading should gradually be improved by the transfer of appointments from the lowest to the two higher grades. The pay of linemen must necessarily vary, not only from Circle to Circle, but also in different parts of the same Circle, and the number of Sub-Inspectors in each grade must be determined, to some extent at least, by local circumstances and the nature of the work to be done. It would therefore be impossible for us to attempt to prepare

detailed proposals dealing with a subject in which local circumstances play so large a part, but in this matter, as in many others, we are confident that reform will be effected by means of the Circle Scheme. It is on the Circle Officer that reliance must be placed to see that the line staff are properly paid and sufficient in number, and it is to meet cases of this kind, amongst others, that we have proposed to place at the disposal of the Director-General of Telegraphs an annual grant for the increase of fixed permanent establishment. He will then be in a position to sanction, on the recommendation of the Circle Officers and without reference to Government, additional linemen, where required, on such pay as he finds suitable; and also to employ additional Sub-Inspectors and gradually to improve their grading by increasing the proportion of the higher paid appointments.

(v) We have proposed * that the Circle Officers shall have power to transfer members of the line establishment from one Division to another to meet the varying exigencies of different localities. This measure will lend greater elasticity to the system, and will prevent the waste of power which may occur when one Division is short-handed and another has men to spare. If the proposal is approved, we consider that the Construction Branch may well be limited to the number found to be necessary to meet military demands for expeditions, to supply deficiencies where the divisional staff is normally small and exceptional works become necessary, and generally for construction works of exceptional magnitude.

Questions
affecting
subordinate
officers of the
Department.

160. There are several matters affecting the subordinate officers of the Telegraph Department in which we think that the existing system admits of improvement. These are Security Deposits, Fines and Rewards, House Accommodation and Telegraph work on Sundays.

Security
Deposits.

161. (i) A point which has attracted our attention is that every signaller on entering the Department is required to furnish security to the extent of Rs. 150 and that one-fifth of his pay is deducted monthly until this sum is made up. It is possible that this system may have originated in the early days of the Department when telegrams were booked by the signallers themselves, and when therefore they were entrusted with the custody of money and stamps. This, however, is no longer the case. In all important Departmental offices there are booking clerks, and the signallers are entirely relieved of this duty. In small offices, where separate booking clerks are not employed, the Telegraph Master in charge is responsible for the cash and stamps. The security deposit is still retained, but for a different reason. Every signaller is required to execute an agreement binding himself to give three months' notice in writing of his intention to leave the Department, and in default of such notice to forfeit the amount of his deposit. The object of the system, therefore, seems to be the protection of Government against the inconvenience and loss caused by the sudden resignation of an officer who has received an expensive training. For this purpose, however, it is ineffectual. We have been informed that the men who leave the Department suddenly are usually those who do so to better their prospects, because they have received the offer of more remunerative employment elsewhere. In such cases the forfeiture of the security does not, it is said, act as a deterrent, and the men are willing to sacrifice what they have deposited rather than to give up a permanent chance of bettering themselves. But, besides this, papers have been laid before the Committee by the Director-General of Telegraphs, from which it appears probable that the forfeiture of the deposit in cases when due notice of

* Vide paragraph 19 and Appendix F, item No. 20.

resignation had not been given would not be enforced by the Courts, and in fact it is no longer the practice to forfeit the security in such cases.

(ii) We have pointed out elsewhere that the low initial pay of signallers has become a serious hindrance to the recruitment of men of a good stamp, and the effect of the low rate of pay is intensified when the salary which a signaller receives during the first 18 months of his service is reduced by one-fifth. The removal of the deduction, which is at present made, will therefore of itself be beneficial to the Department. Nor is it necessary, in our opinion, that the security should be retained as a safeguard against sudden resignation, or that it should be required from those senior members of the signalling establishment who are responsible for money or stamps. We have gathered from Mr. Berrington's report that the British Post Office acts on the principle that, when an officer resigns suddenly, the loss to Government is on the average covered by the saving that is effected in respect of his pension. The same principle would appear to apply in India, especially in the case of Telegraph Masters and Traffic Sub-Assistants, who though responsible for the cash and stamps in an office, are senior men. Our recommendation, therefore, is that no security should be taken from Traffic Sub-Assistants, Telegraph Masters or signallers and that the deposits already made by officers of these classes should be refunded. We would also include in this recommendation Sub-Assistants in the General List because (1) the nature of their duties is not such as to necessitate their furnishing any security; (2) they will already have furnished security as members of the signalling establishment and should therefore be granted a refund; and (3) consistently with the view of their duties just expressed, they are not in practice required to furnish any fresh security on appointment as Sub-Assistants. As regards the other classes of employes enumerated in paragraph 1 of Chapter F of the Telegraph Code only those who have the custody of cash or stamps should be required to give security.

Fines and Rewards.

162 (i) We have been much impressed by the serious administrative defects of the present system of Check Office fines. These fines are often imposed by a necessarily mechanical application of the rules and by a distant authority without reference to the possible excuses or general character or conduct of the individual punished. The penalties are assessed at a percentage on salary, often a very heavy one. They are quite uncertain in their operation, because it is impossible to examine all drafts and the fines have usually resulted from the examination of only a proportion of messages. Even if fines are imposed only when complaints have been made by the public, the uncertainty for obvious reasons remains and discipline is in no way improved by such punishments. The signallers naturally regard a Check Office fine not as a justly imposed penalty, but as a bit of bad luck, which must be accepted as an incident of their service. This view is so far endorsed by authority that Check Office fines are not taken into consideration in awarding increments or making promotions. In another important respect the system is unfair. When the nature of the fault is such that it is impossible to determine whether the sender or the receiver was to blame, both are fined.

(ii) For these reasons we are strongly of opinion that the Check Office should have no power to fine the Signal Office staff including the clerks. The duty of the Check Office—in the case of mistakes discovered in consequence of complaints or otherwise—should be confined to reporting the case to the Superintendent of the Division or of the Office (as the case may be) for disposal.

(iii) We do not think that the power of fining can be abolished altogether. Fining is occasionally, though in a well managed office rarely, necessary; but it should be laid down clearly in the Code that fines are seldom to be inflicted, as deductions of pay for petty irregularities discourage officials greatly. The proper punishment for casual acts of carelessness or mistakes is a warning, or at most an entry in the character book. More serious offences can be dealt with by the withholding of an increment or of promotion, or by degradation. The Code should provide that fines should never be excessive, and should not exceed 10 per cent. of pay in any one month. The order that a fine must be a percentage of pay should be rescinded; and it should be left to officers to decide the amount with reference to the circumstances in which the offence was committed. We recommend the adoption of the rule observed in the Postal Department that the fining of officers drawing Rs. 100 and upwards per month should be prohibited altogether.

(iv) We consider that in no case should any punishment be imposed unless the fault can be brought home to the guilty party. To punish two persons, when it is impossible to say which is to blame, is indefensible.

(v) That portion of paragraph 185 of the Traffic Code, which refers to the fining of Telegraph Masters, should be cancelled. A Telegraph Master's business is general supervision.

(vi) Emulation between offices is desirable and can best be encouraged by the regular communication to the Circle Officers, Superintendents and Offices concerned, of order of merit lists showing the traffic disposed of by the most important offices in each Circle, and the average outturn for each signaller.

(vii) A yearly grant is already placed at the disposal of the Director-General for the purpose of giving rewards to the signalling establishment. This grant is, however, practically restricted to payments for overtime. We consider that the Director-General should have at his disposal a further grant, out of which he could sanction rewards to individual employes below the rank of Sub-Assistant Superintendent for specific acts of exceptionally good or courageous service.

House accom-
modation.

163. (i) The question of house accommodation was referred to the Committee by the Director-General of Telegraphs* and was dwelt on by practically every deputation of the signalling establishment which we received, the general ground of complaint being that the scale by which accommodation is regulated is insufficient, especially for married men with families, and that it results in overcrowding and insanitary conditions. The dormitory system was also objected to as preventing privacy. The quarters were inspected at different places and instances came to our notice of the conditions complained of, as well as of cases of quarters being unoccupied, the staff preferring to hire accommodation for themselves, even though the adoption of this course, while quarters were vacant, entailed the loss of their allowances. From the evidence received it would appear that the majority of the men prefer to make their own arrangements, the unmarried men clubbing together and renting a house. The Telegraph Department does not undertake to provide accommodation for its signallers and in view of the general unpopularity of the quarters already existing, we recommend that, subject to what is said below regarding young

* See Part I of the Proceedings, page 24.

signallers, no fresh quarters should be rented or constructed except (1) for those officers who must live on the telegraph premises, and (2) in places where the staff are unable to hire accommodation for themselves.

(ii) The rules relating to the scale of accommodation are given in Chapter H of the Telegraph Code, paragraphs 62-81. Under these rules the unit of accommodation is one room of an area of about 220 sq. feet with a bath room and such verandahs as the aspect and climate may render necessary. The accommodation allowed to an unmarried signaller is half of such an unit, to a Deputy Telegraph Master one unit, and to a Sub-Assistant Superintendent or Telegraph Master in charge of an office two units. We have examined the rules for accommodation on State Railways as given in Volume IV of the Public Works Department Code, and find that the scale there prescribed is more liberal than that laid down for the Telegraph Department, the unit of accommodation being one room of an area of about 250 sq. feet. We consider the scale laid down for the Telegraph Department is inadequate, and we recommend that the absolute unit should be one room of an area of about 220 sq. feet with bath-room and necessary verandahs. A Sub-Assistant Superintendent in charge of an office should be allowed free three such units, a Telegraph Master in charge or a married Telegraph Master two, and an unmarried Telegraph Master, or a signaller whether married or not, one unit. In allotting accommodation the needs of the men required to live on the premises must receive the first consideration, any excess accommodation being allotted to them to the extent necessary, and rent being paid under the existing rules at the rate of Rs. 2-8-0 per 100 superficial feet for all accommodation in excess of the free scale. Overcrowding should not be permitted and paragraphs 77 to 79 of Chapter H of the Telegraph Code should be strictly observed, the person concerned being required to rent any extra accommodation which is available and is demanded by the size of his family. In the case of existing quarters, if it is impracticable to divide them according to the specified areas, the nearest division possible should be made, and no rent charged for any excess which has to be allotted over the prescribed scale.

(iii) It is essential that the Sub-Assistant Superintendents and Telegraph Masters in charge of offices and the Testing Telegraph Masters attached to offices should reside on the telegraph premises. Though it is not essential that the rest of the staff should live on the telegraph premises, it is desirable that they should live sufficiently near for their services to be available when needed. Should any accommodation still be available after the claims of the former have been met, the latter should be required to occupy it rent free, forfeiting their allowances for the period of occupation. In all offices where night work is necessary dormitories should also be provided for the use of that portion of the night watch which is not actually on duty for the whole of the watch.

(iv) As an exception to the general recommendation that quarters should be provided only for members of the staff required to live on the telegraph premises, we propose that young signallers on first joining the Department should be provided with quarters, unless they are able to live with their parents or relatives. These signallers are lads on low pay, and we think it very desirable that they should be required to reside in Government quarters to ensure their living in healthy localities and to bring them under some sort of supervision. The quarters needed for these signallers will be few and in selected places only, and they should be occupied by signallers with less than five years' service, the senior men vacating, if necessary, as the juniors join. They should

be built in one block with a common mess room, and each signaller should be given a room of an area of about 220 sq. feet with a bath room. Attached should be quarters for a married Telegraph Master or signaller, who should have general charge of the quarters and be responsible for order and the supervision of the premises.

Telegraph
work on
Sundays.

164. (i) One of the causes which render employment in the Telegraph Department unpopular and *pro tanto* hinder recruitment, is the fact that the employes have to attend office on Sundays and holidays throughout the year, and work on these days as part of the ordinary routine of their service. We cannot doubt that any measure which will have the effect of reducing Sunday and holiday work will be a real boon to the staff, and we have deemed it our duty to consider carefully how far this can be accomplished without detriment to important public interests. At present the ordinary practice is that first class offices (*i.e.*, those which are open from 0 hours to 0 hours), remain open on Sundays and holidays as on other days, while second and third class offices (*i.e.*, those which close for the night, and those which are open for a part of the day only), open on Sundays and holidays for shorter hours than on other days. We understand that in the United Kingdom the principal Telegraph Office in any large commercial centre is open always, but that on all Sundays and on Christmas Day and Good Friday the town sub-offices are closed. In other places the Telegraph Office is usually open on Sunday morning for two hours only in England, Wales and Ireland, and for one hour in Scotland. In this country the practice in the Post Office is to restrict Sunday work as much as possible, and in accordance with rule 2 of the Indian Postal Guide New Year's Day, Good Friday, the King's Birthday, Christmas Day and all Sundays are Post Office holidays. This rule also prescribes that Telegraph Money Orders are granted on every day of the year, that postage stamps, postcards, and embossed envelopes are always sold on the day on which the mail for Europe is closed, but that otherwise no business is done with the public on Post Office holidays.

(ii) We are of opinion that first class offices should remain open always as at present, and we are not in a position to recommend any general alteration in the hours at which second and third class offices are open on Sundays and holidays. But we think that in every place, where there is more than one telegraph office, the question of completely closing on Sundays all or most of the telegraph offices other than the principal one should be considered by the Director-General, and appropriate orders passed. Further, we recommend that from 0 hours to 0 hours on Christmas Day, New Year's Day, Good Friday and the King's Birthday and on all Sundays only Urgent messages should be received from the public, an exception being made in the case of Press messages, which would continue to be received as at present. If this proposal be adopted, only the minimum staff required for the disposal of the traffic remaining at 0 hours on Sunday morning and of the incoming Urgent and Press traffic need be called on to attend office; and a considerable proportion of the telegraph staff will get the benefit of the weekly day of rest. It appears to us to be reasonable that telegraph work on Sundays and holidays should be reduced as much as possible, and that members of the public who desire to send telegrams on such days should be required to pay the Urgent rates.

Retirement
after 25 years'
service.

165. We have now to deal with two requests which were put forward by the representatives of the subordinate staff, but which we are unable to recommend for the approval of Government. * In a number of places visited by

the Committee the delegates of the signalling establishment represented that, in view of the fact that Telegraph officials have to work on Sundays and gazetted holidays throughout the year, they should be allowed to retire on full pension after twenty-five years' service, and on full invalid pension on the completion of twenty years' service. Along with this representation has been considered a proposal, which originated in the Committee itself, that power should be taken to compel the retirement on a proportionate pension after twenty-five years' service of signallers who have been found to be inefficient and unfit for promotion. We are of opinion that the request of the signallers is not one which should be granted, and that Article 448 of the Civil Service Regulations sufficiently provides for cases in which compulsory retirement is expedient.

Provident Fund.

166. (i) Nearly all the deputations of signallers received by us on tour represented the desirability of instituting a Provident Fund for the benefit of the signalling establishment. The underlying idea evidently was that Government should add a bonus equal to the amount subscribed, pensionary rights being nevertheless retained. It was pointed out that the equal bonus, though suited to Railways, was impracticable for a pensionable service, and the delegates were closely questioned as to the acceptability of a Provident Fund similar to that which is maintained for the officers of the Department. The system of that fund is that subscription is compulsory up to a limit of 5 per cent. and may extend to 10 per cent. on salary at the option of the subscriber, pensionary rights being unaffected. No bonus is given by Government, but interest is paid on the subscriptions. On this system being fully explained the reply of the delegates almost invariably was to the effect that they would like to see such a fund instituted; and that they believed it would be acceptable to the signalling establishment.

(ii.) No doubt this was the view of the delegates themselves, but it does not follow that a Provident Fund on the terms suggested would really be welcomed by the establishment generally. We cannot recommend any scheme which involves the grant of a bonus from Government; and we are not prepared to support a scheme on the lines of the Officer's Fund for the signalling establishment or for clerks—the latter having included this subject in some of their petitions—because—

- (1) future entrants, in whose case subscription would be compulsory, would probably regard this obligation as a grievance;
- (2) the maintenance of the accounts of such a Fund would require a large staff and involve much trouble; and
- (3) there is, so far as we are aware, no precedent for starting such a Fund for non-gazetted pensionable establishment.

Petitions from Peons.

167. We have received various representations from Task Work Delivery and Office Peons. The most important point raised is the request of the Task Work Delivery peons that their service should be classed as superior. This request has recently been refused by the Government of India,* and we do not feel in a position to re-open the matter. A very frequent complaint is that the men are entertained too long on merely temporary appointment. With reference to this we note that if a proposal made elsewhere† is approved by

* Government of India, Department of Commerce and Industry, letter No. 880-95, dated 26th January 1907.

† *Vide* paragraph 18 (iv) above, *Temporary Establishment*, III.

Government, the number of men without permanent appointments will not be unduly large. With the other points raised by the peons the Director-General of Telegraphs can best be left to deal.

Representations of Chambers of Commerce. — Foreign Tariff.

168. Before we conclude this Chapter we must refer to certain subjects in which the commercial community are particularly interested. The desirability of reducing the existing tariff for foreign messages was brought to our notice by the representatives of several Chambers of Commerce, and a special plea was made by the Bombay Chamber for the reduction of the rates to Japan and Aden. We do not consider that any questions relating to foreign telegrams fall within our mandate, and on each occasion we have informed the representatives of the Chambers that we were unable as a Committee to deal with the matter or to offer any recommendation to Government. We have, however, thought it right to draw the attention of the Government of India to the strongly expressed representations of the mercantile community, and we are confident that suitable action will be taken when opportunity arises.

Inadmissible Code words.

169. A reference may here be made to another point which formed the subject of a representation by the Chambers on several occasions. The rules recently issued regarding the inadmissibility of such Code words as are combinations of two or more words in plain language contrary to the usage of the language, have been criticised as imposing an unnecessary restriction on the senders of telegrams. The rules require that the sender of a telegram in Code or in any plain language other than English or the vernacular should sign a certificate that the message does not contain any such inadmissible combinations. Exception has also been taken by the Bengal and Upper India Chambers of Commerce to the procedure under which the certificate has to be signed on a printed slip attached to the back of the Telegraph form, so that a double signature is required to every Code telegram. We understand that the certificate is intended to ensure compliance with an International rule which is binding on all Telegraph Administrations, and it is unnecessary therefore to deal with the merits of the question. But as regards the double signature, it may be pointed out that the difficulty can be met by printing the certificate immediately above the space in the form where the signature of the sender has to be written; and it seems advisable that, as soon as the existing stock of forms has been exhausted, a revised form should be introduced which will obviate the inconvenience now felt in this respect.

Publication of Telegraph rules in the vernacular.

170. It may be convenient to refer here also to two suggestions which were made to the Committee by the Upper India Chamber of Commerce, *viz.*, the publication in the vernacular of the rules for Inland telegrams and the representation of the Telegraph Department in Chambers of Commerce. Both these recommendations appear to us to deserve very favourable consideration. We understand that an abstract of the postal rules in which the public are chiefly interested is published by the Post Office in all the more important vernaculars of India, and we think that if a similar abstract were prepared by the Telegraph Department and translated into, at any rate, a few of the most widely used languages, this would be beneficial both to the public and to the Department.

Representation of the Telegraph Department in Chambers of Commerce.

171. As regards the latter suggestion, it is unnecessary for us to dwell on the advantages of maintaining close relations between the officers of the Department and the commercial community. Railway officers are

already members of the Committees of several Chambers, and we have reason to believe that these bodies would be glad to have Telegraph officers also on the Committees. We trust that this arrangement may be made wherever possible.

**Madras-Burma
Cable.**

172. (i) The Chamber of Commerce at Rangoon drew our attention to the necessity of improving telegraphic communication between India and Burma. At present all messages have to be transmitted by one or other of the two land routes, of which one enters Upper Burma from Assam through Manipur and the other follows the Arakan Coast to Taungup and then strikes across country to Prome. In both cases the line passes through a long tract of inaccessible and sparsely inhabited country, where interruptions from various causes are frequent and repairs are difficult to execute. We understand that when both lines are in full working order the existing wires are quite sufficient, but that when one route is interrupted and all messages have to be transmitted by the other, the wires become congested and cannot carry the whole of the traffic. The result has been that Deferred messages are often most seriously delayed, and that for weeks at a time during the past year they were not accepted for transmission at all. The Chamber suggested that in order to remedy this state of affairs the Baudot system of working should be introduced between Burma and India, and that an alternative route should be provided, which would not be subject to interruption, by laying a cable from the Madras Coast to Burma.

(ii) We have ascertained that the Government of India, before considering seriously the question of undertaking the very large capital expenditure and heavy maintenance charges which would be entailed by the adoption of the last mentioned suggestion, have asked the Director-General to examine more fully the feasibility of improving the land lines to Burma, not only by the provision of additional wires, if necessary, but primarily by the entertainment of additional line establishment and the supply of stores at suitable points. Information has also been received that Baudot instruments have recently been installed at Akyab and Rangoon, and that Calcutta has commenced to work Rangoon on these instruments with Akyab in translation. We believe that the results obtained from the use of a Baudot installation on one or both of the present land lines, from such of the measures contemplated by the Government of India as may finally be adopted, and from the improvements already introduced by the substitution of aerial spans for river cables in certain localities, will obviate the necessity for any sea cable between Cape Negrais and Madras.

**Revision of the
Telegraph
Codes and
Rules.**

173. The proposals which we have made in this Report will, if adopted, necessitate substantial modifications in the Telegraph Codes, rules and regulations. The Departmental Committee* which prepared the decentralisation scheme in 1904 recommended that a thorough revision of these compilations should be undertaken, and that an officer of some standing should be placed on special duty for the purpose. We endorse the recommendation of the Departmental Committee.

* *Vide* paragraph 45 of the Report of Messrs. Thomas and leMaistre.

CHAPTER VI.

SUMMARY AND CONCLUSION.

Summary of
recommendations
of the
Committee.

174. We have now completed our review of work of the Telegraph Department in all its branches, and it remains that we should summarise the chief recommendations for its improvement which have been made in the foregoing Chapters. We have been convinced that radical changes in the organisation of the Department are necessary[†], without undue increase of establishments and consequently in expenditure, the staff is to cope successfully with the great growth of traffic. Our proposals will cost money, but they have been framed with the greatest possible regard to economy, and we cannot doubt that if traffic continues to increase, they will very considerably curtail the additional expenditure which would otherwise be inevitable. The main proposals which have been made are the following* :—

(1) The division of the country for Telegraph purposes into eight Circles corresponding as nearly as possible with Provincial limits and intended ultimately to be exactly coterminous with Postal Circles. (Paragraphs 5, 6 and 7.)

(2) The appointment to the charge of each Circle of a high Telegraph Official with the title of Director of Telegraphs. (Ditto.)

(3) The reorganisation of the Head-quarter staff of the Department: the revised staff to consist of—

1 Director-General

1 Director of Traffic

1 Director of Construction

1 Personal Assistant to the Director-General

1 Assistant Superintendent for Traffic

1 Assistant Superintendent for Construction.

(Paragraphs 7 and 8.)

(4) The Directors of Circles and of Traffic and Construction to be placed on one list and their appointments to be interchangeable. (Paragraphs 7 and 34 (iii).)

(5) The abolition of Sub-Divisions and the constitution of the Division as the unit of administration. (Paragraph 10.)

(6) The increase in the number of Divisions from 20 to 34. (ditto.)

(7) The reduction of the clerical establishment of the Direction, a saving of Rs. 1,412 a month being effected. (Paragraph 8.)

(8) The creation of the office establishments of Circle Officers and revision of the clerical establishment of Divisional Superintendents, the additional cost being Rs. 4,533 a month. (Paragraph 15.)

(9) Proposals for improving the financial control exercised by Government over the Department and for increasing the powers of the Director-General to incur expenditure both on works and on establishment. (Paragraphs 16 and 18 and Appendix E.)

(10) The grant for this purpose to the Director-General of Telegraphs of power to incur extra expenditure on fixed establishment up to a maximum of Rs. 1,80,000 a year subject to the condition that the total sanctions together in any one year shall not increase the expenditure on account of fixed establishment to be included in the Budget Estimate of the following year by a larger sum than Rs. 30,000 a month or Rs. 3,60,000 a year. (Paragraphs 16 and 18.)

* The minor proposals here omitted will readily be traced from the Table of Contents.

(11) The devolution to the Directors of Circles of extensive powers and the enlargement of the powers of Superintendents. (Paragraph 19 and Appendix F.)

(12) The eventual formation of a Traffic Branch consisting of the Superior Officers employed in the large signal offices. (Paragraph 21.)

(13) The immediate formation of a Technical Branch consisting of an Electrical Engineer-in-Chief, five Electrical Engineers, three Technical Sub-Assistant Superintendents and thirty-eight Telegraph Masters and signallers, the eventual extra cost as compared with the existing establishment being Rs. 42,984 per annum. (Paragraphs 25 to 29 and Appendix G.)

(14) The revision of the scales of pay of the administrative officers of the Department so as to equalize the prospects in the Department with those in the Public Works Department. The cost of this measure is Rs. 87,800 per annum, of which only Rs. 6,000 is properly debitable to the Circle Scheme. (Paragraph 35.)

(15) Improved arrangements for the selection and appointment of candidates for the Provincial Service Branch of the Superior Staff. (Paragraph 40.)

(16) Proposals for improvement in the selection of Traffic Sub-Assistants and for the formation of a new grade at a cost of Rs. 4,800 per annum. (Paragraph 44.)

(17) Proposals for improvement in the selection and training of Upper Subordinates of the General Branch. (Paragraphs 46 and 47.)

(18) The reorganisation, as summarised in paragraph 61 of the Signalling Establishment at an immediate maximum cost of Rs. 8,07,000 and an ultimate cost of Rs. 3,30,000.

(19) The revision of the pie-money system as summarised in paragraph 83.

(20) A scheme for the automatic increase of the Signalling Establishment in proportion to the increase in traffic. (Paragraph 84.)

(21) Proposals regarding the manner in which increases of the supervising establishment should be sanctioned. (Paragraph 85.)

(22) Proposals for the extension of recruitment for the General Scale from European Schools. (Paragraph 87.)

(23) Proposals for the improvement of the Training Classes for signallers. (Paragraph 88.)

(24) The raising of the qualifying test for Departmental signallers to twenty-three words a minute in plain language and for a corresponding increase in the standard for Postal signallers and Military Telegraphists. (Paragraphs 89 and 90.)

(25) Abolition of the annual test in signalling. (Paragraph 89.)

(26) Arrangements for the reduction in the number of transfers of signallers and Telegraph Masters. (Paragraph 91.)

(27) Change of the designation of all signallers to "Telegraphist." (Paragraph 92.)

(28) Proposals for the appointment of female signallers. (Paragraph 94.)

(29) Improvement of the Combined Office system. (Paragraphs 96 to 109.) This includes—

(a) The adoption of a more liberal policy regarding Guarantees. (Paragraph 97.)

(b) Annual programme of new Combined Offices to be opened. (Paragraph 98.)

- (c) A higher standard of efficiency amongst Postal signallers. (Paragraph 99.)
- (d) The grant of allowances to Postal signallers while under training. (ditto.)
- (e) Improved rates of pay for Postal signallers (paragraph 101), and for that purpose—
- (f) The placing of an annual grant limited to 35 per cent. of the revenue from Combined Offices at the disposal of the Director-General of the Post Office, for all expenditure on Combined Offices. (Paragraphs 102 and 103.)
- (g) Recruitment of the Local Scale from Postal signallers. (Paragraph 104.)
- (h) Training of Postal Superintendents in Telegraph work. (Paragraph 105.)
- (i) Inspection of 3rd class Combined Offices by officials of the Post Office. (Paragraph 106.)
- (30) Statement of principles which should govern the classification of offices as Departmental and Combined. (Paragraph 108.)
- (31) Proposals for the conversion of certain Departmental Offices. (Paragraph 110.)
- (32) The immediate transfer to the charge of the Examiner of the greater portion of the work now carried on in the Check Office and the ultimate transfer of the remainder. (Paragraph 111.)
- (33) The eventual amalgamation and decentralisation of Postal and Telegraph Accounts. (ditto.)
- (34) Proposal for a new Signal Office in Calcutta. (Paragraph 112.)
- (35) Simplification of the work in the Check Office and the formation of a Statistical Branch. (Paragraphs 113 to 118.)
- (36) Reorganisation of the Store Branch. This will effect a saving of about Rs. 600 a month (paragraphs 119 to 126) and includes—
 - (a) The abolition of the appointment of Superintendent of Stores and the appointment of an officer trained in store work as Chief Store Keeper. (Paragraph 121.)
 - (b) The depôts at Madras, Bombay, Karachi, and Rangoon to be the source of supply of all stores for the whole of the areas assigned to them. (Paragraph 122.)
- (37) Gradual organisation of graded pay for the clerks in each large signal office and for the clerks in the small signal offices in each Circle. (Paragraph 135 (iii).)
- (38) Proposals for the simplification of procedure in signal offices and the acceleration of traffic therein. (Paragraphs 138 to 141.)
- (39) Reduction of the main classes of telegrams to two and revision of the rates for the Urgent class, the loss of revenue to Government being calculated as Rs. 1,80,800 or Rs. 5,36,120 according to the proportion of the present Ordinary telegrams which may be sent by the new Urgent class. (Paragraph 147 and Appendix P.)
- (40) Improvements in the Railway Telegraph Service. (Paragraph 153.)
- (41) Simplification of Divisional accounts. (Paragraph 156.)
- (42) Proposals for the training of Assistant Superintendents. (Paragraph 157.)
- (43) Proposals for the grant of Study Leave. (Paragraph 158.)

(14) Improved rates of pay for linemen and gradual improvement in the grading of Sub-Inspectors. (Paragraph 159.)

(45) The abolition of Security Deposits. (Paragraph 160.)

(46) The abolition of Check Office fines and the limitation of other fines. (Paragraph 162.)

(47) Provision for the grant of Rewards for the staff of the Department. (Paragraph 162 (viii).)

(48) Improvements in the scale of House Accommodation for signallers. (Paragraph 163.)

(49) Limitation of Telegraph work on Sundays. (Paragraph 164.)

No exact estimate of the net financial results of the proposals of the Committee is possible.

175. It is impossible for us to give an exact estimate of the net financial result of our proposals, although where practicable the cost has been stated. From several of the measures which we have suggested substantial savings may be expected, *e.g.*, the limitation of the number of transfers, the conversion of certain Departmental offices into Combined and the reduction of the clerical establishment in signal offices owing to the simplification of the arrangements for dealing with traffic. Small savings may also be effected by the reorganisation of the Check Office and the Store Branch. But the precise amount of the saving cannot in any case be stated with accuracy. On the other side of the account there are several items involving expenditure the amount of which cannot be exactly calculated. As examples of this we may mention the outlay on office buildings for Directors of Circles and Superintendents of Divisions (against which there is a saving in the shape of the sale proceeds or the rent of existing buildings); allowances to postal signallers while under training and the introduction of improved rates of pay for this class of official; introduction of a graded system of pay for signal office clerks; increased pay for linemen in certain localities and regrading of Sub-Inspectors; and finally increased expenditure due to the revision of the scale of accommodation for signallers and Telegraph Masters.

Immediate financial effect of the proposals relating to establishments.

176. Although we are unable to give an accurate estimate of the net cost of our proposals as a whole we can state the sum which it will be necessary, if our proposals are approved, for the Government of India to provide for increased cost of establishments in the Budget of the Telegraph Department for the year in which the new scheme comes into force. We have already stated (paragraph 16 (v)) that in our opinion the Director-General should be called on to provide the cost of all improvements in the pay of the establishment and of all new appointments from the grant for the increase of fixed establishment which we have proposed. To this rule there are only two exceptions, *viz.*, the reorganisation of the Signalling Establishment and the increased expenditure on Combined Offices. The immediate cost of the reorganisation of the Signalling Establishment we have estimated at Rs. 3,07,000, which is an outside figure, as it assumes that the whole of the Average Grade will qualify by the 23 words standard. If the grant to the Director-General of the Post Office is limited to 85 per cent. of the revenue from Combined Offices, the extra expenditure on this account will not, we think, exceed Rs. 1,00,000 in the first year. The grant to the Director-General of Telegraphs for increase of fixed establishment will be Rs. 1,80,000 during the first year, but it must be remembered that this sum will cover a great deal of expenditure which, owing to the growth of traffic, was inevitable in any case. The maximum amount to be provided in the Budget for increased cost of establishments is thus Rs. 5,87,000.

Unanimity of
the Committee.

177. We are unanimous in making the recommendations contained in this Report; and we hope that they may be found to constitute a consistent scheme capable of early adoption. It has been our earnest endeavour to attain that end. We are confident that the general scheme, if such it may be called, embodied in our recommendations will, if accepted, greatly improve the organisation and working of the Indian Telegraph Department and, notwithstanding the initial outlay, prove economical in the course of a few years.

Recognition
of aid afforded
by the Director-
General and his
officers.

178. We desire to express our thanks for the great and varied assistance which we have received from Sir Sydney Hutchinson, the Director-General of Telegraphs, and the Officers of his Department. Sir Sydney Hutchinson gave us invaluable aid not only by his advice in the conferences at Simla and Calcutta, but also throughout our inquiries by affording us, most freely and with great promptitude, a mass of information which involved much labour to compile and without which our work would have been incomplete in many important particulars. The Officers of the Department were called upon, often at short notice, to prepare written replies to a long series of questions and to present themselves for an oral examination which frequently lasted for several hours. They responded to the call cordially and effectively. Many valuable papers were produced, the outcome of much thought and care; and in examination important suggestions or criticisms were often thrown out and ably supported.

Recognition of
the work of the
Secretary.

179. Lastly, we wish to put on record our cordial acknowledgments of the assistance which has been given us by Mr. G. Rainy, I.C.S., our Secretary. He has done his work with industry and care and much ability; and we commend his services to the favourable notice of Government.

C. L. TUPPER.

L. PORTER.

E. A. LEACH.

W. MAXWELL.

R. O. LEES.

T. R. KELLNER.

CALCUTTA;

Dated the 10th April 1907.