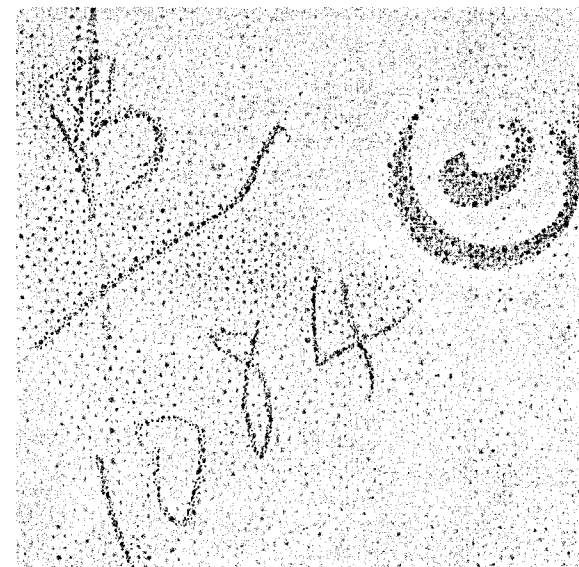




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ROYAL COMMISSION ON THE PUBLIC SERVICES IN INDIA.

APPENDIX
TO THE
REPORT
OF
THE COMMISSIONERS.

Volume XVI.

MINUTES OF EVIDENCE
RELATING TO THE
PUBLIC WORKS DEPARTMENT
Taken at Delhi, Calcutta, Madras, Bombay, and London,
WITH
APPENDICES.

Presented to both Houses of Parliament by Command of His Majesty.



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ROYAL COMMISSION ON THE PUBLIC SERVICES IN INDIA.

MINUTES OF EVIDENCE

TAKEN BEFORE THE

ROYAL COMMISSION

ON THE

PUBLIC SERVICES IN INDIA

RELATING TO THE

PUBLIC WORKS DEPARTMENT

At Delhi, Friday, 14th November, 1913.

PRESENT:

THE RIGHT HON. THE LORD ISLINGTON, G.C.M.G., D.S.O. (Chairman).

THE EARL OF RONALDSHAY, M.P.

SIR MURRAY HAMMICK, K.C.S.I., C.I.E.

SIR THEODORE MORISON, K.C.I.E.

MAHADEV BHASKAR CHAUDAL, Esq., C.S.I.

ABDUR RAHIM, Esq.

WALTER CULLEY MADGE, Esq., C.I.E.

FRANK GEORGE SLX, Esq., C.S.I.

JAMES RAMSAY MACDONALD, Esq., M.P.

R. R. SCOTT, Esq. (Joint Secretary).

W. M. GRIFFITH, Esq., Executive Engineer, United Provinces.

Written Statement relating to the Public Works Department.

71,244. (I.) **Methods of Recruitment.**—Of the numerous Engineers recruited by the Secretary of State under covenant to the Public Works Department there are, it is believed, only 5 men, named below, now remaining in the Public Works Service, who have not been placed on the Imperial cadre, and it is on behalf of these men that this representation is made. Their names and dates of appointment are as follows:—

Name.	Degrees, &c.	Ap- pointed in	Service as		Total ser- vice about	Present Province.
			Conven- anted Engi- neer from	Tem- porary Engi- neer from		
Griffith, W. M.	A.M.I.C.E.	Nov. 1902.	Jan. 1903.	Feb. 1908.	11	United Provinces.
Milner, H. W.	B.Sc.	Do.	1903	1908	11	Madras.
O'Reilly, J. J.	A.M.I.C.E.	Do.	1903	1908	11	"
Dixon, T. I.	B.E.	Nov. 1903.	Jan. 1904.	Jan. 1909	10	Punjab.
Colyer, C. A.	M.I.C.E.	Do.	Do.	Do.	10	"

All these 5 Engineers were recruited by the Secretary of State (under a 5 years' covenant to the Public Works Department) prior to the abolition of the Royal Indian College of Engineering and the commencement of direct recruitment to the Imperial cadre by the Secretary of State in 1905, and so, at that time, could not be appointed by the Secretary of State direct to the Imperial cadre. They were re-

cruited by advertisement in the open market and selection by interview as are the present recruits to the Imperial cadre, but the qualifications required in their case were rather more exacting than those of the present recruits to the Imperial cadre, as they were required to have in addition to a college training 2 years' experience in practical work. The age-limit was in consequence 28 years instead of as at present 24 years (i.e., 4 years higher) and the pay of the appointments was proportionately greater.

At the time of their recruitment hopes were held out to them by senior officials at the India Office, Whitehall, that if their services were approved they could be given appointments in the Imperial cadre, and these Engineers have since forfeited their return passages to England and remained as temporary Engineers in India in the hopes of these prospects being fulfilled.

All these Engineers have now approximately 10 or 11 years' approved service in the Public Works Department, and it is believed that all have been recommended by the Local Government under whom they are serving for places on the Imperial cadre.

71,245. (III.) **Conditions of Service and (V.) Conditions of Leave.**—The present conditions of service of these Engineers as Temporary Engineers are quite unsuitable for men recruited in England by the Secretary of State who are not natives of India or men domiciled in India and their present position is an impossible one because—

(a) They are not under the European leave rules, and are not entitled to furlough to enable them to proceed to England to recruit their healths, and see their relations after a period of service in India.

(b) They are not entitled to a pension.

(c) They are debarred from the higher appointments, in fact Mr. W. B. Gordon, the late Secretary to the Government of India, Public Works Depart-

14 November 1913.]

Mr. W. M. GRIFFITH.

[Continued.]

ment, in an interview at Simla in August 1911 personally informed Mr. Griffith who will give evidence before you that it was the intention of the Government of India gradually to reduce the temporary Engineers to Sub-Divisional (i.e., the most Junior Assistants) charges as sufficient Engineers of the permanent establishment were recruited, to fill the executive appointments.

(d) They are liable to have their appointments terminated at a month's notice.

71,246. (IV.) Conditions of Salary.—(a) Their pay is inferior to the pay and allowances of the Imperial Engineers who were recruited by the Secretary of State after they were, though these Imperial Engineers are at least 4 or 5 years younger (being recruited under a 4 years' lower age limit) and are no better qualified.

(b) Their pay is inferior to the pay and allowances of numerous covenant Engineers recruited in the same years and under the same conditions as themselves who have been transferred to the Imperial cadre.

(c) Their pay is even inferior to the pay and allowances of covenant Engineers recruited several years after they were who have been transferred to the Imperial cadre although they have been holding more senior positions for longer periods than these Engineers or than the Imperial Engineers above referred to in sub-paragraph (a).

As example take the case of Mr. Griffith who in his 11th year of service is only drawing the same pay (i.e., Rs. 700) as he was in his 5th year of service, although for the last 5 years he has held charge as Executive Engineer of one of the more important irrigation divisions of the United Provinces, and his work in that Division has for several years been favourably mentioned in the Annual Administration Reports of the United Provinces Irrigation Branch. His pay is in fact less than the most junior grade of the Imperial Executive Engineers.

71,247. General.—The grievances of these Engineers is that—

(1) The Supreme Government, although having already created a precedent by appointing a number of covenant Engineers to the Imperial cadre, refused the recommendations of their Local Governments to appoint these Engineers to the Imperial cadre although these recommendations were believed to be as strong as others, and in one case (Mr. Griffith) to have been submitted 3 times by the Local Government.

(2) That whilst refusing these recommendations of their Local Governments the Supreme Government accepted those of a further 12 covenant Engineers

Mr. W. M. GRIFFITH

71,248. (Chairman.) The witness said he held the post of temporary Executive Engineer, and appeared on behalf of five engineers who came out originally to India under covenant before the present system of appointment by selection was instituted. He arrived in India on the 1st January 1903. Twelve engineers of his year came out to India under similar conditions, and he appeared before the Committee on behalf of three of them. Of the remainder, two had been made permanent in Madras, one had been made permanent in Bombay, and the others he had not traced, but probably they had all been made permanent.

71,249. He could not state the reason why he and his colleagues had not been absorbed into the Service; that had been a problem he had been trying to solve for the last six years. Of those who had been incorporated in the Service, some were of the same year as himself, some were senior and some were junior. When the last junior men were incorporated, the Government of India refused the recommendation made on his behalf, on the ground that he did not belong to that year, but one man had been made permanent whose covenant had expired in the same year as his own.

71,250. At the time of his appointment, hopes were held out to him of being absorbed in the permanent staff. There was nothing in writing, but on enquiry being made at the India Office as to what were the prospects, he was given to understand that he would probably be taken into the permanent cadre if his

who have since (in 1911) been transferred to the Imperial cadre though these 12 men were (a) all junior in service, (b) In some cases not so well qualified, and (c) In some cases not so well recommended.

The refusal of the Supreme Government to accept the recommendation of the Local Governments on behalf of these Engineers has placed them in a very serious position because they are all well qualified Engineers who 10 or 11 years ago gave up good prospects in England to serve in India. Had they not done so they might by now have reasonably expected to have established good positions in England for themselves. As now situated their 10 or 11 years' service (the most important years in their professional careers) as Irrigation Engineers will be of no value to them professionally in England where no similar work exists and further they have by now lost all their professional connections in England.

These Engineers find themselves in this serious position through no fault of their own, because—

(1) They are fully qualified for the Imperial cadre.

(2) Their services have been fully approved as shown by their being recommended by the Local Government for the Imperial cadre.

(3) They were initially misled at the time of their recruitment in England by having hopes of the Permanent cadre held out to them.

(4) They were misled by the precedent created by the Government of India in transferring a number of covenant Engineers to the Imperial cadre.

(5) In one case, namely Mr. Griffith, it is admitted in writing by Mr. N. F. McLeod the then Chief Engineer and Secretary to Government, Public Works Department, Irrigation Branch, United Provinces, that he led Mr. Griffith to believe he would assuredly receive a permanent appointment.

It is suggested that the placing of these 5 ex-covenant Engineers in the Imperial cadre could easily be arranged by regulating recruitment, and it is further suggested that the placing of these men in the Imperial cadre in places which their age and length of service would entitle them, would improve this cadre, by making it more regular and strengthening it in places where it requires strengthening.

It is hoped that this Royal Commission after due consideration of these facts will recommend His Majesty's Government to place these 5 Engineers in similar positions in the Imperial cadre to those already given to other ex-covenant Engineers, recruited at the same time and under the same conditions as themselves, and so save the threatened ruin of their professional careers.

called and examined.

services proved satisfactory. He believed it had been admitted by the Government of India that there were some grounds for that belief. In the case of one man it was pointed out that it was a practical certainty he would be made permanent, and the question of his probable pension was officially looked into at the India Office.

71,251. Just prior to the lapse of witness's covenant, he went to see the Secretary to the Government of India, Sir Lionel Jacob, when he learnt that he was not to be taken into the permanent cadre in Madras. In that respect it was quite possible that, as there were five covenanted engineers in his year in Madras, Government did not see its way at that time to take all five in. He therefore left Madras, and accepted an appointment in the United Provinces on the understanding from the Secretary of the Local Government that, if his services were approved, he would in all probability be made permanent. At a later period he understood from the Secretary of the Local Government that he was to be made permanent and he then married. He had, however, not been made permanent and Mr. McLeod had kindly written a letter, which he desired to read to the Committee, because Mr. McLeod felt the very awkward position in which he had placed him. The letter was dated 13th October, and was as follows: "My dear Griffith: In February 1907 you came to see me at Lucknow, seeking for an appointment in the Irrigation Branch in these Provinces. You asked what prospects there were of permanent employment in the Imperial

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[Continued.]

Engineer Service in the event of your being offered, and accepting, an appointment as temporary Engineer. You informed me at the same time that you had seen Mr. (now Sir) Lionel Jacob, at Calcutta, and understood from him that there were prospects of your obtaining permanent employ in the Public Works Department, but that such permanent appointment would depend on the recommendations of the Local Government under whom you might take service. I told you that I personally considered that there appeared to be a good chance of your obtaining a permanent appointment in the Imperial Service in the Irrigation Branch in these Provinces, provided that you gave satisfaction and that your service was fully approved in the temporary appointment we were at that time able to offer you. Your work in this Province has been fully approved, and I personally always considered that in view of your service here, and your previous approved service as an Engineer under covenant in Madras, your prospects of obtaining permanent employ were better than those of the other officers recommended, and that you would assuredly be appointed to the Imperial Engineer Service. The orders of the Government of India, rejecting the recommendations of the Local Government on your behalf, have caused me extreme regret, the more so that they have so completely vitiated the personal assurance I had, and the belief I doubtless conveyed to you, of an assured permanent appointment in the Irrigation Branch in these Provinces." He had obtained a recommendation from the Madras Government, and his three colleagues also received recommendation for good services from their Local Governments.

71,252. He had first filled the post of Sub-divisional officer, and for the last five years he had been Executive Engineer, Divisional officer, but he had not been receiving for the latter period the pay of an Executive Engineer of the Imperial cadre. His salary was Rs. 100 less than that paid to the most junior executive officer of the Imperial cadre.

71,253. He was not on a scale of salary. The maximum he could look to under present circumstances was Rs. 700 a month. When first entering the service he began at Rs. 500, and finished at Rs. 700.*

71,254. He desired, with his colleagues, to be incorporated in the Imperial Service, but he would not be prepared to enter at the bottom of the list. He was not aware that the absorption of a certain number of engineers similar to himself had caused a good deal of dissatisfaction in the service. The scale was an incremental scale, and he did not see how it could affect anybody.

71,255. The grounds on which he claimed to be admitted into the service were, first the promise that at the end of his covenant he might be admitted; second that his service had been equal in every way to those engineers recruited at the same time as himself, and who had been taken into the Imperial cadre; third, that unless he was admitted his career was wrecked, because he was too old to begin again in another branch of the profession. If he were admitted to the Imperial Service he considered the whole of his temporary service should count for pension. He asked for equal treatment to those who

were recruited at the same time and under the same conditions as himself.

71,256. He had not been able to afford to subscribe to the General Provident Fund. He had the opportunity of doing so, and about three months ago had been compelled to do so.

71,257. (Sir Murray Hamrick.) He was quite sure his two colleagues, Mr. Milner and Mr. Riley, had not been confirmed. He did not know what pay they were drawing. They were still in the executive establishment of the Madras Public Works.

71,258. He did not know at the time he made his application in England that it was the case with regard to other Departments of the Public Service that men were brought out under five years' agreements and then generally confirmed and put into the Service.

71,259. (Mr. Madge.) It would have been much wiser for him to have obtained some written statement at the time of his application instead of merely a verbal one.

71,260. With regard to his objection to going in at the bottom of the list if made permanent he would point out that the pay of the lowest Imperial officer was Rs. 380 a month, against his present salary of Rs. 700.

71,261. His statement that junior Imperial engineers were no better qualified than the five temporary engineers he represented, was based on the qualifications of his five colleagues. Three of them were Bachelors of Science, and the other two were Associate Members of the Institution of Civil Engineers, which, as a theoretical qualification, was the standard of the Imperial Engineers recruitment. Also they had had at least two years' experience of works in England. Such a training had been insisted upon in their case, but it was not insisted upon in the case of the present Imperial engineers.

71,262. (Mr. Chaubal.) It would be in the power of the Secretary of State to transfer him to the Imperial cadre. The Government of India recommended, and the Secretary of State approved, and then the Government of India undertook the transfer. No representation had yet been made by him to the Secretary of State. He knew nothing of what his colleagues had done in the matter. He memorialised the Government on the 1st July 1912, and received an answer on the 13th May 1913 to the effect: "it is now found that this question is one which is beset with serious difficulties, especially in the case of the Imperial Service, in which the actual number of officers is already in excess of the existing strength, and any increase in the latter is very unlikely." He would like to mention that since that letter was written, 22 further Imperial engineers had been appointed, and in a recent copy of the *Statesman* it was stated that the Government of India had decided as a provisional arrangement to recruit 30 probationary engineers for the Imperial Public Works next year.

71,263. The Secretary of State would have the power to put him at once in the cadre on a salary of Rs. 700.

71,264. (Sir Theodore Morison.) If he were put into the cadre on this salary, he did not see how that would damage the prospects of the Assistant En-

* Mr. Griffith afterwards wrote that he had received an intimation that his rate of pay from the 1st January 1914 was to be Rs. 800 per mensem, i.e., an increase of Rs. 100.

† Mr. Griffith afterwards submitted an addendum in support of his opinion that putting himself and his colleagues into upper places in the cadre would not damage the prospects of junior men by creating a block. He wrote as follows:—

"(1) In the last 10 or 15 years the Public Works Department has considerably expanded and the expansion is believed to be permanent and likely to continue still further.

"(2) This expansion has resulted in the formation of a number of New Divisions and in additional higher administrative appointments.

"(3) The present cadre is badly under strength and the shortage is in the senior and not in the junior years.

"(4) The placing of men of corresponding age in these senior years is the only way in which the cadre can now be brought to its proper strength without resulting in subsequent irregularities and blocks.

"(5) The placing of senior men in the senior years of shortage would not create a block as they being older would retire sooner than junior men recruited now at the bottom.

"(6) The existence of the shortage is proved by the recent sanction of an increase of 42 Engineers to the strength of the cadre and by Mr. Russell's statement before the Commission

that a further 10 per cent. on the cadre (say 80 men) was required.

"(7) The Imperial recruitment having been based on a calculation of giving each recruit Divisional charge after 9 years, it is clear these new Divisional charges should have been allowed for in recruitment 9 years before they were created. It follows therefore that the shortage must exist in all the senior years which were recruited before these new charges were created or thought of and not in the junior years.

"(8) To recruit this shortage, $42 + 80 = 122$ men, entirely from the bottom, even if recruitment were spread over 10 years, would require an additional recruitment of 12·2 men above the normal, i.e., an over recruitment of over 30 per cent. for 10 consecutive years. The effect of this would obviously be to create a very serious block.

"(9) To maintain the cadre correctly the rate of retirement needs as careful regulation as recruitment which could only be assured if these new recruits in the senior years were neither older nor younger than the men of the years in which they were placed."

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Mr. W. M. GRIFFITH.

[Continued.]

engineers below him, whereas, it would mean ruin* to him if he were not transferred on equal terms with other men of his year recruited under the same conditions as himself, who had already been transferred to the Imperial cadre. If the Government advanced the argument that a certain number of engineers were brought out on covenant, the best of whom they would make permanent and reject the others, he agreed that although some of the officiating engineers, under whom the latter men had directly served, might not agree with that view, the final

(The witness withdrew.)

At Delhi, Monday, 17th November 1913.

PRESENT :

THE RIGHT HON. THE LORD ISLINGTON, G.C.M.G., D.S.O. (Chairman).

SIR MURRAY HAMMICK, K.C.S.I., C.I.E.

SIR THEODORE MORISON, K.C.I.E.

SIR VALENTINE CHIROL.

MAHADEV BHASKAR CHAUBAL, Esq., C.S.I.

ABDUR RAHIM, Esq.

GOPAL KRISHNA GORHALE, Esq., C.I.E.

WALTER CULLEY MADGE, Esq., C.I.E.

FRANK GEORGE SLY, Esq., C.S.I.

HERBERT ALBERT LAURENS FISHER, Esq.

JAMES RAMSAY MACDONALD, Esq., M.P.

And the following Assistant Commissioners:—

W. P. HOUSDEN, Esq., Superintending Engineer, United Provinces.

E. W. CLARKE, Esq., Executive Engineer, United Provinces.

D. W. AIKMAN, Esq., Superintending Engineer, Punjab.

J. W. B. LOUGHRAN, Esq., Executive Engineer, Punjab.

R. R. SCOTT, Esq. (Joint Secretary).

R. P. RUSSELL, Esq., Secretary to the Government of India in the Public Works Department.

Written Statement relating to the Public Works Department.

N.B.—The opinions expressed in this memorandum are purely personal and are in no way those of the Government of India.

71,266. General.—(1) Organization of Department.—For purposes of organization, each Province is split up into Circles, Divisions, and Sub-Divisions; in some Provinces these are called Divisions, Districts and Sub-Divisions:—

(i) Administrative charges:—

(a) All Public Works in a Province are in the charge of a Chief Engineer; in some Provinces there are separate Chief Engineers for the Buildings and Roads and Irrigation Branches.

(b) Circles of Superintendence—

These are in charge of Superintending Engineers. A Circle usually contains 3 or more Divisions.

(ii) Executive charges:—

(a) Divisional charges—

These are in charge of Executive Engineers and occasionally in charge of Temporary Engineers. A Division usually contains 3 or more Sub-Divisions.

(b) Sub-Divisional charges—

These are in charge of Assistant Engineers, Temporary Engineers, and Upper Subordinates.

(2) Engineer Establishment.—The Engineer Establishment of the Public Works Department is composed of—

(i) An Imperial Establishment consisting of—

(a) Civil Engineers appointed by the Secretary of State in England.

(b) A limited number of Royal Engineer Officers.

* Mr. Griffith afterwards submitted the following explanation.

"My reasons for claiming that failure to transfer me on equal terms would mean ruin are:—

"(1) Financial.—My present pay is not and for the past 5 years in which I have held Executive charge has not been sufficient to maintain that position. The actual pay I have drawn throughout my service and the positions held are given below.

Year.	Pay per annum in Rs.	Positions held.	REMARKS.
1903	600	Sub-Divisional Office	Under 5 years Covenant in Madras.
1904	600	Ditto	
1905	650	Ditto	
1906	600	Ditto	
1907	700	Ditto	
1908	600	Sub-Divisional Officer to October then Executive, Executive Engineer in Divisional charge.	Temporary Engineer, United Provinces.
1909	600	Ditto	
1910	600	Ditto	
1911	700	Ditto	
1912	700	Ditto	
1913	700	Ditto	

He wrote:—

In consequence instead of contributing to a provident fund I have actually been drawing out those small savings which in my earlier service I was able to accumulate, and am in consequence now without resources.

I have placed myself in this position in the belief: (a) That eventually justice would be done by the Government of India, when I hoped this loss would be adjusted. (b) In the confidence of my ability to eventually prove my worth. (c) In the knowledge of the repeated representations which were being made on my behalf by the Government of the United Provinces.

In justification I submit this belief has been shared by others in high authority better able than I to judge such matters.

Also to the fact that for the past 4 consecutive years my name has received special mention in the published Annual Irrigation Administrative Reports of the United Provinces as a result of the effect of my administration of the Rohilkhand canals.

(2) Professional.—Placing an officer in the Public Works Department cadre below the position of men of his age would mean that not only throughout his service would he draw inferior pay to his brother officers, but forcible retirement at 55 years would prevent the possibility of his rising to the higher administrative appointments. To an ambitious officer this would mean professional ruin.

17 November 1913.]

Mr. R. P. RUSSELL.

[Continued.]

(ii) A Provincial Establishment consisting of—

(a) Civil Engineers appointed from the Indian Engineering Colleges.

(b) Promoted Upper Subordinates.

Although the Engineer Establishment of the Department mainly consists of an Imperial and Provincial Service as above, for reasons which are explained in paragraphs 7-11, there exists—

(iii) An Establishment of Temporary Engineers recruited locally in India who belong to neither (i) nor (ii).

(3) Strength of Establishment how determined.—The strength of the Department (Imperial and Provincial Service) is based upon the number of constituted superior posts, viz., Administrative and Divisional charges. The number of officers required to fill the total number of superior posts is determined from actuarial tables drawn up with reference to the conditions of service. The rate of annual recruitment to maintain the total strength is similarly calculated. The cadre number and rate of annual recruitment is so determined as to ensure as far as possible that an Assistant Engineer will rise to Executive rank and be in charge of a Division after ten years' service.

At present the question of fixing the cadre strength of the entire Department is before the Secretary of State. The cadre proposed by the Government of India has been based upon a total number of 440 superior posts, viz.:—

Public Works Department	...	...	344
State Railways	...	...	96
Total	...	...	440

The 344 superior posts in the Public Works Department are made up of:—

Imperial Service posts	...	...	241
Provincial Service posts	...	...	103
Total	...	...	344

The 96 superior posts in the State Railways Department are made up of:—

Imperial Service posts	...	...	66
Provincial Service posts	...	...	30
Total	...	...	96

The number of men required to man 241 Imperial posts in the Public Works Department and 66 in the Railway Department is 509 and 139 respectively, or a total of 648. The number of men required to man 103 Provincial posts in the Public Works Department and 30 in the Railway Department is 219 and 61 respectively, or a total of 280. The total cadre of the Public Works Department including the Railway Branch is therefore 928. The proportion of Imperial posts is therefore nearly seven-tenths and of Provincial posts is nearly three-tenths of the total.

In addition to the strength of 928 officers a provision has been made of 60 officers to enable the Government of India to comply with requests from Foreign employers and Railway Companies for the services of Government Engineers.

The number of Provincial Service Engineers has been fixed by the Secretary of State at present at 280.

(4) Actual strength compared with cadre.—The actual strength of the Department on October 1st, 1913, including officers on deputation was as under:—

Imperial Service.				
	Public Works Department.	Railways.	Total.	
(a) Civil Engineers	...	...	559	118
(b) Royal Engineers	...	...	30	40
Total	...	...	589	158
Provincial Service.				
Civil Engineers	...	...	183	26
Grand Total	...	...	772	184
				956

(5) Majority of Sub-Divisional charges must devolve upon Upper Subordinates.—The general result of calculating the cadre strength in the manner described is of importance. If the number of officers required to fill the administrative appointments is deducted, the balance consists of Executive Engineers, Assistant Engineers in practically equal proportions, after excluding the leave reserve, that is to say, the number of officers theoretically on duty of not more than 10 years' service is approximately equal to the number of officers theoretically on duty of more than 10 years' service excluding those holding administrative charges. It has already been pointed out that an average Division contains about 3 Sub-Divisions. A Division is the charge of an Executive Engineer; as the number of Assistant Engineers, that is, officers of not more than 10 years' service is supposed to be equal approximately to the number of Executive Engineers, it follows that in theory there is only one Assistant Engineer available for sub-divisional charge in each division. In practice, however, the number of Assistant Engineers available to hold charge of Sub-Divisions will not admit of even one sub-division in every division being held by officers of this rank. The bulk of the Sub-Divisional charges must therefore be held by Upper Subordinates.

(6) The Sub-Divisional Officer.—The Sub-Divisional Officer, is the officer primarily responsible for the actual carrying out of work through the medium of his subordinates. He is the officer who is primarily responsible for making all the arrangements, supervising and passing work, arranging contracts, settling rates, measuring up work, preparing bills for payment, and to a very large extent paying for work done. He has a drawing account and prepares all initial accounts. He is the officer who is primarily responsible for the expenditure of a very large amount of public funds. Although the accounts of the Sub-Divisional Officer are subject to strict scrutiny and, after compilation in the Executive Engineer's Office, to audit, and although the work of the Sub-Divisional Officer is inspected by the Executive Engineer, nevertheless upon the capability and integrity of the Sub-Divisional Officer to a very large extent depends the return for expenditure incurred. In a large number of cases, the work of a Sub-Divisional Officer employed upon maintenance does not call for any high engineering skill, but it is mostly in such cases where the responsibility of obtaining a fair return for outlay is the most difficult and the least susceptible of any check or control. Slackness and want of efficient control over subordinates, contractors, or Departmental labour, means waste of public funds.

(7) Reluctance to employ Upper Subordinates as Sub-Divisional Officers cause of employing Temporary Engineers.—For long past, there has been a great reluctance on the part of the officers responsible for the administration to place any but senior, qualified and selected Upper Subordinates in charge of these responsible positions of trust, particularly in the case of Canal Sub-Divisions. As the number of such selected Upper Subordinates has been found insufficient to man the number of Sub-Divisions recourse has been had to the employment of Temporary Engineers. Temporary Engineers are for the most part Engineers who have received an Engineering education at an Indian College, but who failed to obtain a guaranteed appointment. There are among them Europeans domiciled in India, Eurasians, Indians, and a few men originally appointed in England by the Secretary of State on covenant, who took up appointments on the expiry of their covenants.

(8) Temporary Engineers. Conditions of service.—Temporary Engineers are on the footing of monthly paid servants; they are appointed by local Governments for periods of a year; their services are renewed annually if required; their services can be terminated on a month's notice on either side; their pay is governed by no rules; they usually receive increases of salary every second year if recommended; they are non-pensionable; they are entitled to the ordinary rules regarding privilege leave; they are not entitled to furlough or sick leave, except as an act of grace; their pay usually varies from Rs. 250

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per mensem to Rs. 750 per mensem; as a rule, an officer on the latter rate of pay will have had 20 or more years' service in the Department, or be from 40 to 45 years of age. Temporary Engineers with but few exceptions are employed as Sub-Divisional Officers and have very little prospect of ever being employed in a higher capacity. In consequence of their having been relegated to this position for so long many of the present Temporary Engineers are unlikely to be fitted for more responsible positions.

(9) *Temporary Engineers to large extent permanently employed.*—It should be clearly understood that in those Provinces in which they are most largely employed Temporary Engineers are engaged not so much with the object of forming an elastic element to meet the fluctuating operations of the Department, as for the purpose of eking out the permanent establishment, because the Department, as organised, requires a greater number of qualified Upper Subordinates for positions of trust than can be obtained from the Upper Subordinate Establishment as it exists. The necessity for this extra establishment of Temporary Engineers sandwiched between the Upper Subordinate and the permanent staff of Engineers would to a large extent disappear if the Upper Subordinate Establishment were sufficiently attractive to induce a greater number of men of better class, family and position to enter it.

(10) *Difficulties of dispensing with services of Temporary Engineers.*—As now constituted, it is impossible to increase the proportion of Assistant Engineers to the Executive Engineers without blocking the former for Divisional charges. On the other hand, it is increasingly difficult to obtain good qualified Temporary Engineers to serve under existing conditions. The longer a Temporary Engineer serves, the more difficult does it become to dispense with his services and to cast him adrift with, in most cases, but little prospect of other employment, owing to his having become stale, less active and efficient than he was, by reason of having been relegated to a position from which he has little chance of being promoted. Moreover, the work of maintaining canals, regulating the supply of water and looking after its distribution, of attending to the record of irrigation and to duties generally falling under the category of up-keep and maintenance, though of the first importance, does not need the possession of qualities and experience that are in any demand outside Government service.

(11) *Growth of size of Divisional charges.*—The necessity for the creation of the present service of Temporary Engineers has, apart from that already given, been accentuated by another cause, viz., that the number of the Divisional charges has by no means kept pace with the growth of operations of the Department. In many cases the Divisional charge has become unwieldy, the Sub-Divisions have increased in number, size and importance; as the number of Assistant Engineers is directly based upon the number of Divisions there are less Assistant Engineers now available for Sub-Divisional charges: on the other hand the Sub-Divisional charge being larger and more important is less suitable as a Subordinate's charge.

Twenty years ago the Engineer cadre of the Public Works Department (excluding Railways) consisted of 581 officers; the outlay per annum was about 4½ crores. In 1911-12 the cadre stood at 705 officers and the outlay had increased to 11½ crores; thus while expenditure has increased by 150 per cent., the Establishment has only increased by 21 per cent. Twenty years ago there were in the United Provinces 24 Divisional charges with an annual outlay of about 58 lakhs. At the present time there are 36 Divisional charges to cope with an annual expenditure of 130 lakhs; thus while expenditure has increased to 2¼ times what it was the Divisional charges have only increased 50 per cent. In the Irrigation Branch, Punjab, 20 years ago there were 18 Divisions and an annual expenditure of 64 lakhs. In 1912-13, there were including the North-West Frontier Province 41 Divisions to cope with an outlay of 258 lakhs; while expenditure has been quadrupled, the number of Divisional charges has only been slightly more than doubled. In the Buildings and Roads Branch of the same Province while the expendi-

ture has risen from 31 lakhs per annum to 70, the number of Divisions has in the same time only been increased from 10 to 13.

(12) *Divisional Officer's control over initial expenditure.*—The work that devolves upon the Divisional Officer by this increase of work leaves him less free to move about his charge and pay that personal attention to initial outlay which is so important when so large an expenditure of public funds is initially entrusted to officers of the Subordinate class. No system of audit, check, or paper control on the part of the Executive Engineer can take the place of personal supervision. An increase in the number of Divisions and a reduction in their size will automatically provide more Assistant Engineers for Sub-Divisional charge and is a move which, in my opinion, is urgently called for. Nevertheless the only true solution of the present difficulty appears to me to lie in the direction of improving the conditions of the Upper Subordinate Establishment or the method of recruitment so as to secure more men of the better class to enter it to man these important Sub-Divisional charges. An improvement in pay and conditions will not, I am afraid, alone effect this object without introducing some system of nomination as well, at any rate for some time to come. If a sufficiency of capable and thoroughly trustworthy Upper Subordinates could be obtained, the necessity for the employment of Temporary Engineers would largely disappear.

(13) *Suggested improvements in conditions of service of Temporary Engineers.*—Until such time as more men qualified in every way for Sub-Divisional charge can be obtained from the Upper Subordinate establishment, the continued entertainment of a body of Temporary Engineers seems to be unavoidable, and, this being so, these Engineers should be placed on a better footing. It is practically certain that a number of Temporary Engineers who have considerable service, 20 years and more, as Sub-Divisional Officers, cannot continue to be efficient Sub-Divisional Officers much longer, the activity and keenness required of youth cannot be expected from men of advancing age, it is equally certain that appointments as Divisional Officers cannot be provided for them except at the expense of the claims of men in the Permanent Service. It has also to be considered that the salary of a Temporary Engineer might reasonably expect to receive on the basis of length of service if efficient is more than is warranted to an officer in Sub-Divisional charge. To improve the service I would suggest that Temporary Engineers might be engaged on short agreements of 3 or 5 years on stated terms as to pay after an initial period of probation, that they come under the Indian Service rules as regards furlough and that on being discharged they receive a bonus equal to one month's salary for each year of completed service. I would suggest some such rules being made applicable to Temporary Engineers now in employ.

(14) *Inadequate provision of staff for works under construction, and necessity for considering future demands in advance.*—The establishment of the Public Works Department is subject to much more violent fluctuations than the establishments in other departments. The completion of any large Canal Project for example necessitates the employment of a large staff to work it. The Secretary of State has laid down the principle that the permanent staff should be regulated by the ascertained requirements of the service for the discharge of the duties which may certainly be reckoned upon as recurrent year by year, irrespective of any new large undertakings provision for which should be made when necessary by the employment of temporary establishment. This principle has generally been held to preclude the taking into consideration of posts which, although not immediately necessary, can with certainty be foreseen as being permanently required a few years hence. Any increase to a cadre by the normal method of recruitment can only be obtained very slowly and I think it would be advantageous to commence recruitment for future certain requirements as soon as they become manifest. For example, the Secretary of State sanctions a new Canal Project which is estimated to take 10 years to complete. The construction may involve the creation of 12 or more "superior posts" which as long as construction is in hand are deemed

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temporary appointments and as such are excluded from the superior posts on which the cadre is calculated. From the moment of commencement it can be foreseen with sufficient accuracy that within 10 years the new work will involve say 8 permanently required "superior posts": for the purposes of recruitment these posts should be taken into consideration as tending towards obtaining the establishment required by the time it is wanted and lessening the necessity of departing from normal recruitment to make up for deficiencies which usually tends to interfere with an even flow of promotion. In order to ensure that the establishment is maintained at a strength which is sufficient to meet actual requirements of work the cadre should be examined and revised if necessary more frequently than it is at present.

The present system is altogether too rigid to meet the requirements of a Department liable to the sudden fluctuations caused by sanctions to large Projects absorbing a large number of officers. A new Canal Project may readily require for many years 30, 40 or more officers for construction purposes. In order to provide this establishment the practice is to withdraw a number of selected permanent Executive and Assistant Engineers from their regular charges and to employ Temporary Engineers to the extent necessary to make up the full number of men required, the places of the permanent officers so withdrawn being taken by Temporary Engineers, Permanent Upper Subordinates (frequently of a grade too low for their charges) and Temporary Upper Subordinates.

In view of the large amount of constructional work always going on and likely to continue for many years, it would probably be safe to augment the superior posts on which the cadre is based by 10 per cent. to provide for the constructional programme. On the Triple Canal Project in the Punjab there are at the present time 56 officers employed, viz., 31 belonging to the Permanent Establishment and 25 Temporary, the former to a large extent abstracted from works in operation.

Briefly put, the construction of new works, under the existing conditions, is carried out largely at the expense of the efficiency of the arrangements required to administer works already constructed, and is thoroughly uneconomical. The apparent saving in Permanent Establishment which is susceptible of some calculation is far more than counterbalanced by the waste that cannot be calculated but which is known to occur and cannot but occur by the employment of an establishment to a large extent inefficient and unreliable on the upkeep of works. It cannot be too strongly insisted upon that the opportunities for scamping work, waste or fraud on construction work, carried out on estimates which can generally be prepared with close accuracy are almost negligible, compared with the work of lesser importance perhaps from a purely engineering aspect, but involving in the aggregate far greater outlay which is dependent for economical results very largely upon the capability and integrity of the officers employed in immediate charge.

71,267. (I.) *Methods of Recruitment.*—*Imperial Service.*—The number of recruits required annually is determined with reference to the sanctioned strength and is based, as already stated, upon actuarial calculations. The normal rate of recruitment is occasionally modified to make up for abnormal deficiencies. Intimation is given to the Secretary of State of the number of recruits required each year. This intimation is given by the Government of India annually in November. The Secretary of State is supplied in May of the following year with a detail of the distribution by Provinces. The distribution of the annual number of recruits among the various Provinces is roughly determined *pro rata* according to the existing deficiencies in each.

Generally the present method of recruitment, which has been adopted by the Secretary of State since the abolition of the Royal Indian Engineering College at Cooper's Hill, has been satisfactory as far as technical qualifications are concerned. Under the existing system some very excellent men have been sent out, many of them in no way inferior in technical knowledge to the best of the Cooper's Hill Engineers. The selection Committee have not, however, always paid quite as

much attention as is desirable in selecting candidates with the requisite social status for service in India where this important consideration should not be ignored. The Indian is quite capable of detecting any marked inferiority in social status in the officer under whom he is serving, and where such exists his respect diminishes. The general standard of education as apart from technical education is probably not as high now as it was in the days of Cooper's Hill when most of the men entering that institution came from the Public Schools. I consider that the Selection Committee should be represented by at least 50 per cent. of senior officers in the Department on the active or retired lists, in the latter case by men who have not been severed from the Department too long. These are the men who know the requirements best.

While recognising the arguments that can be brought forward in favour of the abolition of the Royal Engineering College at Cooper's Hill, there is a widespread feeling that the *esprit de corps* which the training at that College fostered and the spirit and qualities that it engendered throughout the service—which under present arrangements must largely disappear—involves the loss of an asset both to the Department and to the State of great value.

The *Provincial Service* is recruited from the students of the Indian Engineering Colleges, and by the promotion of selected Upper Subordinates. The present rate of recruitment to maintain a strength of 280 is 14 annually, viz., 9 and 10 students and 5 and 4 Upper Subordinates in alternate years. The distribution of the appointments is laid down in the Public Works Department Code, Volume 1, paragraph 149. The system of appointing the qualified students from the Thomason College at Rurki to the lists directly under the Government of India is detailed in paragraph 151 of the same Volume.

The training afforded at the Indian Colleges is directed to the requirements of India and is generally satisfactory. The average Indian College recruit is less highly trained than the average recruit appointed from England; on the other hand his knowledge of the language, people, and methods adopted in India render him more useful for his first year or two. The institution of the Provincial Service does not attract to the Indian Colleges the class of men that formerly went to them. The fact that Engineer officers and subordinates are trained together at the same institution is not very satisfactory, it would be preferable if the training of the two classes could be entirely separated and provided for by separate institutions.

71,268. (II.) *System of Training and Probation.*—*Imperial Service.*—The recruits appointed to the service by the Secretary of State have undergone as a rule at least a year's practical training on works in England. I do not consider any further training or probationary period in India is necessary. The Selection Committee have had ample opportunity of seeing and finding out all about a candidate before they recommend him to the Secretary of State for appointment. If a candidate were liable after spending two years' probationary period in India to be discharged as unsuitable and sent home again, this insecurity of appointment would, in my opinion, operate as a bar to the best men coming forward. I am not aware of any Imperial Service where appointments are made under such conditions.

A further objection to my mind consists in the difficulty of giving practical effect to a probationary period of service having any very real value. The exigencies of the service render it most difficult to secure that a probationer shall serve even for one year under one officer and that period is too short. The number of officers of sufficient standing who would be likely to take any real interest in a probationer, or whose verdict could be relied upon, or who would have the opportunity of keeping him under his eye is very few. As a rule the utmost that would result would be that the probationer would be attached to some Assistant Engineer in charge of a Sub-division and the report would be submitted by the Executive Engineer upon mostly second-hand information. Few Executive Engineers would have any opportunity of usefully employing a probationer immediately under them. Many would not have the time to pay very much attention to them. A probationer sent home after two years as unsuited for

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the Indian Service would find it difficult to secure an opening at a critical age in his career. In every Government service there must be some bad bargains and no system of probation which is practicable will obviate this. The present system under which the recruit is usually employed at Headquarters for a time and then attached to a Sub-divisional Officer to pick up the language and ways of the country until he is capable of managing a Sub-divisional charge of his own answers well enough; it is not as a rule in the first two years that a man's worth makes itself apparent amidst surroundings entirely new to him.

Provincial Service.—Passed Engineer students from Rurki College are required to undergo a year's training on works which is at the same time a probationary period as an Apprentice. (The recruit for the Imperial Service has already gone through a period of training before he has been selected.) It is desirable that this period of probation should be retained. Indian students have less facility for applying the theory they have learned to practice than Europeans, and before being appointed as Assistant Engineers, it is desirable that Government should have an opportunity of judging how they are likely to turn out.

71,269. (III.) **Conditions of Service.**—*Imperial and Provincial Services.*—The rule requiring the retirement of an officer from the service on attaining the age of 55 years should be made absolute. The suspension of this rule for a period of 5 years has caused the gravest discontent throughout the entire service. Although the number of officers actually granted extensions of service was relatively small, the number of officers whose prospects and emoluments were seriously affected was large—the result was seriously to reduce the pensions of certain officers below what they had every prospect of receiving had the operation of the rule not been suspended. No officer affected in this way received any compensation. It would be difficult, if not impossible, to calculate the monetary loss sustained by loss in promotion sustained by five officers at least for every extension of service granted, but I think that the officers whose pensions have been affected could be determined and that the loss should be made good to them.

The rule which provides for the compulsory retirement of an officer who on attaining the age of 50 years has not been recommended for advancement to administrative rank should be more rigidly enforced.

Owing to the comparatively small number of higher appointments in the Department I think that the system of selection as opposed to mere seniority should play a greater part in making promotions to the administrative grades. The principle is already laid down in the Public Works Department Code, Volume I, paragraph 80, but is usually only very partially carried out.

71,270. (IV.) **Conditions of Salary.**—*Imperial Service.*—The scale was last revised in 1908 when an incremental system instead of a graded scale was introduced: the benefit of the new scale was, however, discounted by the fact that exchange compensation was at the same time abolished. Even under the improved conditions it is doubtful if the improvement in salaries has been commensurate with the increased cost of living in India. Under the re-organization scheme of 1908 an officer who is qualified to hold charge of a Division cannot draw a salary of more than Rs. 800 per month, viz., that due to him on completion of 10 years' service unless he is actually holding such a charge. I consider that this restriction should be removed as it is through no fault of his own, if through errors in recruiting, or paucity of Divisional charges, that an officer cannot be provided with a suitable charge after 10 years' service.

There are at present two grades of Chief Engineer. Chief Engineers who are Secretaries to local Governments or local Administrations are entitled to a local allowance of Rs. 250, and 150 respectively. The salaries of Chief Engineers are:—Chief Engineer 2nd class Rs. 2,500; Chief Engineer 1st class Rs. 2,750. The anomaly frequently arises that a Chief Engineer in a local Administration receives less emoluments than a Chief Engineer junior to him under a local Government. Owing to the fact that all Chief Engineers do practically the same work, and have the same responsibilities, and

that the total number of Chief Engineers in the whole of India is small I consider that the separation of the Chief Engineers into two classes should be abolished. Under present conditions the majority of Chief Engineers are unable to reach the 1st class until immediately before they have to retire and a large number are unable to reach that class at all. To remove these anomalies and objections I consider that there should only be one class of Chief Engineer and all should be paid the same, viz., Rs. 3,000 per mensem and that the local allowances should be abolished; considering the fact that Chief Engineers are invariably selected men of not usually less than 28 to 30 years' service this salary is not too high. In this connection I may point out that Commissioners of Divisions are not divided into grades; in each Province there are a number of Commissioners whereas there are only about 16 Chief Engineers in the Public Works Department all over India.

The present salary of the Secretary to the Government of India in the Public Works Department is Rs. 3,500. I consider that the duties and responsibilities attaching to the appointment warrant it being placed on the same footing as the Secretaryships to the Government of India in the Home, Finance, and Commerce and Industry Departments. A Secretary in the Public Works Department is always an officer of from 6 to 10 years' longer service than any other Secretary. Unlike other Secretaries who are generally drawn from a grade lower than that of a Commissioner of a Division, the Secretary to the Government of India in the Public Works Department is invariably drawn from the highest grade in his own Department. Having regard to the additional cost of living in Simla, the additional emoluments of only Rs. 500 per mensem more than those drawn by a Chief Engineer, 1st class, are insufficient to render the Secretary financially better off than a Chief Engineer of a Province. In all the cases cited the additional emoluments are far greater. For these reasons I think the salary of the appointment might reasonably be raised to Rs. 4,000 as in the case of the appointments referred to.

Provincial Service.—It has been contended that because officers of the Provincial and Imperial Service of the same standing perform approximately the same duties they should be treated similarly in all respects as regards salary. I entirely dissent from that view. The Provincial Service has been created to provide an opening for Indians desirous of entering the Department of Public Works; the salary, conditions of leave, pension, &c., have therefore to be framed to suit the conditions of Indians or others whose domicile is India, and bear no relation to the Imperial Service which provides for an establishment whose domicile is for the most part England. The conditions regarding salary, leave, pension, &c., require to be fixed so in each case as to attract the class of person required, upon entirely independent grounds. The present salaries in the Provincial Service—subject to the removal of the restriction which prevents an officer from rising to more than Rs. 535 per mensem unless in charge of a Division—seem to be suitable enough.

71,271. (V.) **Conditions of Leave.**—*Privilege Leave.*—Under existing rules, privilege leave allowances are contingent upon a return to duty—Civil Service Regulations, Article 264. In the case of combined leave the privilege leave allowances are not contingent upon a return to duty; an officer on combined leave at the end of his service can therefore without penalty retire at the end of it. I am of opinion that, in so much as privilege leave is leave already earned, the restriction contained in the Civil Service Regulations referred to above should be relaxed.

Under existing rules an officer can only accumulate 3 months' privilege leave; it occasionally happens that when an officer has accumulated 3 months' privilege leave, the exigencies of the public service render it impossible to grant the leave applied for; in such cases I think that, although the existing limit of 3 months' privilege leave at one time as maximum should be adhered to, the balance of the privilege leave earned should be placed at the credit of the officer concerned, seeing that he was debarred from taking it through no fault of his own.

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Study leave.—As a general rule an officer in the Public Works Department desirous of improving his knowledge by visiting works out of India to study the more up-to-date methods of construction or design can only do so during his leave and if recommended by his local Government. Such an officer is required to furnish a report to the Secretary of State and is allowed his actual travelling allowance by rail. This allowance is insufficient to recoup an officer for his incidental expenses in connection with his tour of inspection when on furlough pay. I consider that an officer in such cases should be treated more liberally by being placed on *deputation*.

Furlough.—There is a wide-spread feeling throughout the entire department that the rules regarding furlough pay are so inadequate as to preclude many officers from taking furlough earned; in cases of sickness even, a rest from work or ordinary furlough can only be taken at the expense of running into debt. The present rules provide for furlough being taken on half pay with no minimum (except as provided in Article 320 of the Civil Service Regulations), and with a maximum of £200 per quarter. In the case of officers of the Indian Civil Service and of Military officers subject to the Civil leave rules, the furlough allowances paid at the Home Treasury are subject to a minimum of £500 per annum or last salary drawn, whichever is less. A Civil Engineer of the Imperial Service who takes furlough after completing 8 years' service receives as furlough pay, £279 per annum as a maximum. Even after 18 years' service his furlough pay falls short of that which a Military Officer subject to the Civil leave rules can draw after 8 years' service. It is not in the interests of Government that its servants should be compelled to forego furlough because they cannot afford to take it, or that they should become embarrassed if they are forced to take it. Numbers of instances can be cited of officers in the Public Works Department who have been unable to take furlough on this account. It is presumed that in fixing a minimum of £500 per annum or last salary drawn for furlough allowances, Government had in view the cost to an officer of maintaining himself in England in the state of comfort he was entitled to expect during a period of rest, and if so there would appear to be no valid reason why one Imperial Service should be accorded treatment so much less favourable than another. I consider that the furlough rates of pay should be so fixed as to render it possible for an officer to take furlough without financial embarrassment; and this at present junior officers cannot do. The propriety of extending to the Public Works Department the rules regulating furlough allowances in the case of members of the Indian Civil Service and Military Officers in Civil employ is suggested for the consideration of the Commission, both as regards the maximum and minimum.

It has been suggested that the rule which precludes an officer from taking ordinary furlough for a period of 3 years since return from last furlough exceeding three months' duration, might be modified so as to allow of an officer taking furlough if due to him at any time when his services can be spared. It frequently happens that an officer wishes to take ordinary furlough and can be spared, but is prevented from doing so by the rule quoted (Civil Service Regulations, Article 308).

71,272. (VI.) **Conditions of Pensions.**—*Retiring pensions.*—The inadequacy of the retiring pensions has been a standing grievance in the Department for the last 30 years. The history of the case appears to indicate without any doubt that when the retiring pension was originally fixed at Rs. 5,000 after completion of 25 years' service, it was assumed that this amount should be, as in fact it was, the equivalent of £500. In the earlier prospectuses of the Royal Indian Engineering College the pension was by a footnote so equated. Owing to the great fall in exchange when the rupee fell to little more than a shilling, the rate of exchange for pension was minimised in 1890 to 1s. 9d. The present ordinary pension converted at 1s. 9d. per rupee is equivalent to £437 10s. 0d. It has for years been contended that owing to the increased cost of living this pension fixed more than half a century ago is entirely inadequate to

enable an officer to live in England with any approach to the standard of comfort to which he has been accustomed or which his social standing entitles him to expect to be able to provide for himself and his family in his old age. Many memorials in which practically the whole department have participated, have been addressed to the Secretary of State on this subject during the last 6 years, but no reply has been received to them, except to the effect that, as the question will come within the scope of the Commission's enquiry, no action can be taken pending their recommendations. It is therefore to the Royal Commission that the department looks for a full enquiry into this standing grievance. Owing to the fact that for one reason or another neither the Government of India nor the Secretary of State has been able to give any reply to the large number of memorials that have been submitted since 1907-08, it is considered that in equity any amelioration that it may be decided to make should be held to apply to those officers who in the meantime have been compelled to retire.

The rules governing the pensions of Imperial Service Engineers are contained in Civil Service Regulations, Chapter XXX. These rules were introduced to improve the pensions which were formerly governed by Chapter XIX and although the proportion of average emoluments constituting the pension was raised very considerably for service up to 20 years, the effect has been to reduce the actual amount of pension in nearly all cases by reason of the lowering of the maximum amount of the pensions. The fact that the salaries have been raised considerably since these rules were introduced, it is believed in 1884, renders the maximum pensions that can be claimed still more disproportionate to average emoluments than formerly. Under present rules the maximum ordinary pension is only sixteen-sixtieths of average emoluments after a service of 22 years, and about ten-sixtieths of average emoluments after a service of 30 years. In other services the maximum pension much more closely approaches the half of average emoluments.

It is considered that the maximum pensions ordinarily obtainable by Imperial Service Engineers should not be less than that of officers of the Indian Army, Indian Medical Service, and Military officers in Civil employ, viz., £700 after 30 years' service, and that the following scale of pensions might reasonably be conceded, viz., (a) after 25 years' service £500 if paid in England or Rs. 5,000 if paid in India; and (b) after 30 years' service £700 if paid in England or Rs. 7,000 if paid in India.

Special pensions:—

(a) After 3 years' approved service as a Superintending Engineer £100 if paid in England or Rs. 1,000 if paid in India.

(b) After 3 years' approved service as a Chief Engineer £100 if paid in England, or Rs. 1,000 if paid in India; that a proportionate amount of (a) and (b) be granted for service of less than 3 years. The number of administrative appointments in the Public Works Department is small and it seems equitable that if an officer through no fault of his own should be unable to serve for the full period of 3 years as a Superintending Engineer or a Chief Engineer he should be entitled to a proportionate share of the additional pension according to the service rendered.

Invalid pensions.—In 1884 a new scale of Invalid Pensions was introduced under which officers of the Imperial Service of the Public Works Department, although entitled to a much higher percentage of average emoluments as an invalid pension, actually received less by reason of the maximum permissible being reduced. For example, an officer under the old rules (Article 474, C.S.R.) after 12 years' service was entitled to twelve-sixtieths of average emoluments which has been calculated to be Rs. 1,920 subject to a maximum of Rs. 2,400. Under the new rule (Article 641, C.S.R.) the same officer is entitled to twenty-two-sixtieths calculated to be Rs. 3,520 subject to a maximum of Rs. 1,800. Similarly an officer after 19 years' service under the old rules was entitled to nineteen-sixtieths with a maximum limit of Rs. 3,800. Under the new rules the same officer although entitled to twenty-nine-sixtieths is limited to a maximum of Rs. 3,000 only.

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[Continued.]

As the increase in the percentages introduced by the rules of 1884, Article 641, C.S.R., can have no other meaning but that the new rules were intended to improve the conditions, it is considered that the maximum limits should be increased to what they were before and which still govern all other services coming under the operation of Article 474.

71,273. (VII.) Such Limitations as may exist in the Employment of Non-Europeans and the Working of the Existing Division of Services into Imperial and Provincial.—In paragraph 71266 (2) it has already been shown that the present strength of the Provincial Engineer Establishment, which is in the process of being worked up to, is based upon 133 superior posts out of a total number in the Public Works Department including Railways of 440—or a ratio of seven-tenths Imperial and three-tenths Provincial. I am of opinion that, although there are doubtless many exceptions, as a rule Indian Engineers are more wanting in originality, less capable of applying book knowledge to practice, less reliable where forethought has to be exercised, have less initiative and are less suited for the positions of responsibility calling for prompt action than Europeans: in the control of Subordinate Establishments they are generally weaker and are apt to be swayed by considerations of caste and creed. The Indian Engineer usually does better

Mr. R. P. RUSSELL called and examined.

71,275. (Chairman.) The witness said he had occupied his present position as Secretary to the Government of India in the Public Works Department for about eight months.

71,276. With reference to the question of recruitment from Royal Engineer Officers, the witness explained that the Department had to employ a number of these officers as a war reserve, but he advocated the employment of Royal Engineers both on Railways and Public Works, provided that they were in an equality with the Imperial Service Officers and started at the bottom of the list. If a Royal Engineer of fourteen years' service was suddenly transferred to the Public Works Department he interfered with promotion and this caused a good deal of natural discontent. Royal Engineers were posted to a Province and there was no rule by which certain of them were employed on Irrigation and others on buildings and roads. Generally they preferred buildings and roads, and if it could be so arranged they were given employment in that branch. Their number was limited to 70, of whom 40 went to Railways and 30 to Public Works.

71,277. With reference to recruitment in England, the witness considered that social status was requisite in the Public Works Officer but not more so than in any other officer. If a system of open competition was introduced followed by a course of training in a College on the Cooper's Hill model, he thought it would tend to rub off the angles and to raise the men of humbler social status to an equality with the others. Competition combined with nomination would be the best system if it could be worked; and although he did not think it would be easy he thought it could be worked. He valued an English training very highly indeed, as the training an Engineer received in England and the opportunities afforded to him for seeing works were considerably more valuable than they were in India. This applied more to Railway work than to Irrigation, as Irrigation was not practised in England and the practical part of the work had to be learnt in India. The training, however, which a man required in order to deal with hydraulic problems was of a higher order as a rule than the training for other branches of Engineering, and even in the case of an Irrigation Officer English Engineering practice stood a man in better stead. The foundation teaching was better in England than could be obtained in Indian colleges.

71,278. The witness was against the Indian Engineer going to England and being appointed by the Secretary of State to the Imperial Service. He should be encouraged to go to England to get a better training, but in the Imperial Service as now constituted salary and leave and furlough rules were

under European direction than when left to himself, especially where confronted with difficulties. As a general rule he is far better at construction than design, but in construction he is apt to leave the dealing with difficulties too much to subordinates and contractors. Further, unless fully instructed in every detail, his want of attention to minor details and want of taste results in a lower standard of finish. On the other hand his knowledge of the country, the people and the language, often render him less dependable than the European upon his subordinates in making arrangements for carrying out work. In many cases he can carry out work under conditions that would be very difficult for a European. I am doubtful if it would be wise to increase the relative proportions of Provincial Service Engineers to Imperial for some time to come or to increase the existing limit of 10 per cent. in the case of Indians appointed to the Imperial Service by the Secretary of State. The increase should come in time but the process must be gradual and dependent upon the exhibition of those qualities in which, as compared with the European, the Indian Engineer as a rule is at present lacking.

71,274. (VIII.) Relations with other Services.—I have no remarks to enter under this head: the relations of the Public Works Department with other Services are satisfactory on the whole.

based on the assumption that the service would be manned by Engineers whose domicile was England, and he did not see why a man who was domiciled in India should come in under the same conditions. He advocated something in the nature of a foreign service allowance for the European Officer, as it was necessary, in order to attract a European, to offer considerably higher terms than were offered to Indians, whose cost of living was not comparable with that of Europeans.

71,279. He would like to see Indian Officers recruited and trained in India, and if that were done and the Europeans recruited in England had a standard of salary higher than that of the indigenous community he thought the Service would be contented and satisfied, but not as it at present existed. He did not think the argument of the Provincial Service that they were not paid the same as the Imperial Service was an argument that should be listened to; it was a natural claim and it was foreseen from the outset that the time would come when men would ask for equal pay for doing the same duties. He was prepared to lay down the principle that a European, in consideration of an English domicile and loss of amenities, must be paid at a higher rate than the domiciled officer.

71,280. The witness said he had asked many Indians whether their grievance was non-equality of pay and he had met no Indian yet who admitted that that was the grievance. The average Indian appeared to recognise that it was reasonable to pay a European Officer recruited in England a different rate of salary from the Indian living in his own country.

71,281. The witness was of opinion that the Engineering Courses at the Colleges in India were satisfactory, but he did not like the system under which Provincial Officers and Subordinates were trained in the same college. Candidates for the superior Service should be sent to Rurki and those for the subordinate Service to the other Colleges. The concentration in one College of all the Provincial Service classes would probably result in the best training available. He added, however, that the prospects in the Public Works Department did not attract the higher classes of Indians to the same extent as they were attracted to the Provincial Civil Service.

71,282. In the period of ten years from 1903 to 1913 the recruitment figures were as follows: From Cooper's Hill 98, including 3 Indians (none since 1907); by Nomination of Secretary of State 257, including 5 Indians; Royal Engineers 35; Temporary Engineers 15 (none since 1909); Covenanted Engineers 32 (none since 1911).

71,283. With regard to the present proportion of vacancies reserved for promoted officers from the

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subordinate Service, the witness said that personally he considered too many Upper Subordinates were now promoted into the Provincial Service, and he would rather see an increase in the number of officers trained in Rurki for the Provincial Service and a reduction in the number of promoted subordinates. It was desirable to reward the particularly good and able subordinate, but it was only the exceptional upper subordinate who made a good officer.

71,284. As to maintaining the distinction between the Imperial and Provincial Branches, the witness said that in practice there were no Imperial and Provincial Divisions. Provincial Engineers were eligible for so many Divisions, but a Division which was of no importance to-day might be a very important one three years hence. There was no earmarking of Divisions for Provincial and Imperial officers they were all on one list, doing the same work. He would prefer to retain the existing titles Imperial and Provincial, although the responsibilities and prospects were the same in both branches. The general character of the Department would be lowered if the promoted Upper Subordinate was called a Civil Engineer with the same status as an Imperial Engineer. The main ground for retaining the Provincial Service was that an Upper Subordinate was from time to time promoted into it, and therefore the service should not rank with the Imperial.

71,285. With reference to the statement that had been made to the commission that the proportion of Indian trained Engineers, who had risen to Executive rank was larger than the proportion of trained English Engineers, the witness said possibly that was so, but the statement applied to the Imperial Rurki trained men who had entered the department before the creation of the Provincial Service, and it would not apply to the Provincial Service officers. The men who were attracted to Rurki when recruitment was direct to the Imperial Service were better than the men who now entered the Provincial Service. He admitted that this was hardly an argument in favour of retaining the Provincial title.*

71,286. The witness suggested an increase of cadre to the extent of 10 per cent. to meet the requirements of construction, the 10 per cent. being over and above the figures given in his written statement. The present cadre made no allowance, except in a very indirect way, for the officers who were required for the construction programme. The recent proposals for increasing the cadre had been put forward mainly with the object of obtaining the Secretary of State's sanction to a new method of calculating the cadre, and the increase asked for was almost entirely due to the readjustment of Provinces, the splitting up of Bihar and Orissa and Bengal; the net increase was very small. The Government of India had already agreed to an increase of 3, and they were merely awaiting the sanction of the Secretary of State.

71,287. The main reason for employing Temporary Engineers was the difficulty of finding a sufficient number of upper subordinates qualified for permanent posts; there was an actual deficiency of permanent men. He realized the great difficulty of employing Temporary Engineers on a quasi-permanent basis. He was inclined to think it would be better if upper subordinates could be obtained of the class required for sub-divisional charges. As to how such a class could be obtained, the witness said the only system he could suggest was nomination. The subordinate Civil Service was recruited mainly by nomination of men of good family, and the Public Works Department would require to have something of the same kind. For the higher sub-divisional work a certain education was necessary. He suggested the officers selected for this higher work should be sent to Rurki with the prospect of getting sub-divisional charges if they qualified. It should not be left to competition. If the method he suggested was carried out, Temporary Engineers could be restricted to temporary jobs. Even with an addition of 10 per cent. for construction purposes there would always be a margin because the additional 10 per cent. or 90 officers would not suffice to carry

* A note on this point was afterwards put in by the witness and has been printed as Appendix I.

out all the construction programme. The number of administrative posts would have to be increased in order to provide for the increased numbers of Assistant Engineers. When construction works were undertaken there would be usually an increase in administrative appointments even if only on a temporary basis. It would be necessary, of course, to guard against a block, but he did not think there would be any real danger of a block.

71,288. The witness said he should like to remove the charge bar at Rs. 800 in all cases where an officer had qualified for appointment to the executive grades. He thought it would militate against recruitment to have two incremental scales, one for Assistants and one for Executive Engineers, with promotion from one to the other by selection. Under existing rules a man did not necessarily obtain a division after he had completed his career as an Assistant Engineer; he had to be qualified. That power of excluding the unfit was a form of selection; but a man had to be very bad before he was prevented from rising to executive rank. It would be reasonable, the witness considered, to pay a Temporary Engineer more than an officer of corresponding rank in the Provincial or Imperial service in consideration of the fact that he was employed on a non-pensionable basis.

71,289. The reserves for leave and training were adequate. Many officers often failed to take the long leave to which they were entitled because they could not afford to take it on the authorised rate of leave allowance. The present dissatisfaction in regard to leave allowances might be met to some extent by allowing officers to commute a certain proportion of their furlough into full pay leave, but a concession of this character would hardly be in accordance with the spirit of the furlough rules, and he would not like to commit himself to a definite opinion off-hand.

71,290. As to retirement after twenty or twenty-five years' service, the witness said there had been very few retirements after twenty years' service, but no difficulty was put in the way of anyone who desired to go. If better terms were offered in the way of pension he would favour the abolition of optional retirements after twenty years' service. In his judgment twenty years was rather too short a term of service to qualify an officer for retirement.

71,291. As to the complaint that officers were freely given extensions beyond fifty-five years of age, the witness said there had been a demand on the part of officers to remain in the service after that age but it had been definitely decided that no extensions were to be given. For five years the rule as to retirement at 55 had been in abeyance with the result that a limited number of men were benefited at the expense of a very large number.

71,292. The witness was in favour of the establishment of a Family Pension Fund for the Public Works Department and he thought there was a general desire for it. It should be in lieu of the Provident Fund, as he did not think the average man could afford to join both. The average proportion of salary contributed to the General Provident Fund by officers might be taken as 10 per cent., but it was possible to subscribe 12½ per cent. He was in favour of permitting Temporary Engineers to subscribe to the Provident Fund and he was under the impression that they were allowed to do so now.

71,293. (Sir Murray Hammick.) The witness said his experience of other parts of India was not sufficient to enable him to decide whether there were objections to making Rurki an All-India College for the Provincial Service. The men who now came into the Provincial Service from Rurki were not so good as the men who formerly entered the Imperial Service, and he thought that was due chiefly to the fact that the openings in the Public Works Department were not as good as they now were in other services. It was the European chiefly who went to Rurki in former days when officers from Rurki were appointed to the Imperial Service, but even then there were some Indians and a considerable number of Anglo-Indians. Europeans did not go to Rurki now. The demand for entrance into the Public Works Department might be gauged by the demand for entrance to Rurki. He was not prepared to say there was

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not a keen demand on the part of Indians to gain admission to Rurki; and he did not say that the standard of Indians had fallen off; in his opinion as good Indians got into the service now as formerly. What he did contend was that Anglo-Indian and domiciled European candidates were not so good now as they used to be; and the reason for this was that they were not contented with the Provincial Service. Assuming that the Provincial Service was intended to provide a career for Indians, he did not think it necessary to improve the conditions of the service so as to attract Anglo-Indians of the class which formerly entered the Imperial Service. The Anglo-Indian and domiciled European who wished for something better than the Provincial Service could go to England. He suggested that young Indian graduates from Rurki might be nominated for the upper subordinate service of the Public Works Department as that would give the Service more upper subordinates of the kind required. His proposal was to improve the pay of the upper subordinate Service in order to attract a better class of Indians, but he thought that in any case there should be some form of nomination. He thought it would be possible appreciably to improve the pay of the upper subordinate Service without raising the pay of the Provincial Service. Although the starting pay of the Provincial Service would be less, officers in that Service could rise to the rank of Chief Engineer, whilst the upper subordinate officer would not rise beyond the rank of a sub-divisional officer.

71,294. It was difficult to get temporary Engineers under existing conditions of pay, but if the temporary Engineer establishment was improved or placed on a more permanent footing he was not sure that enough temporary Engineers would not be obtained in India. A large number of Indians were employed as temporary Engineers, about 170 in all, and Local Governments found an increasing difficulty in getting temporary Engineers of as good quality as used formerly to be obtainable.

71,295. (Mr. Valentine Chivul.) The witness was of opinion that the prospects now held out to men passing out of Rurki had discouraged Anglo-Indians and domiciled Europeans, and this would have been regrettable if the College had been established for Anglo-Indians or domiciled Europeans; but he understood that Rurki was established to provide for Indians only. In the early days, when officers in India could obtain for their sons a very much cheaper education at Rurki than in England, with good prospects of an appointment in the Imperial Service, young men were sent there, but they were not attracted by the Provincial Service. He thought the average Indian now obtained from Rurki was as good as he used to be.

71,296. The witness said the theoretical training in irrigation in England was better than could be obtained in India, but practical work was best carried out in India. All matters connected with hydraulics demanded a higher training than other branches of engineering. He thought the training in India on irrigation works was even better than could be obtained in Egypt or America, or at least as good, with the exception perhaps of one or two important works in those countries. It would be a good thing, he thought, for a man to visit works in other countries but he was not keen on giving the men a year's practical training on such works. He was in favour of giving engineering officers facilities later in their career to visit foreign countries on deputation.

71,297. (Mr. Rahim.) The witness said he was satisfied with the class of Indians now going to Rurki and had no suggestions to make for securing a better class. By class he meant social standing, not necessarily caste, though no doubt social status depended to some extent on caste. Not every Rurki officer proved successful, but the Rurki men were satisfactory on the average. Any improvement that could be made in the social status, whether of Europeans or Indians, would be of benefit to any Service. He did not complain of the average Indian trained engineer; his intellectual capacity was very good. Even if there was a keener desire on the part of Indians to qualify as Engineers in the Public Works Service he did not think the proportion should be increased, because it was necessary to retain for

a considerable time a large proportion of the administrative and higher appointments in the hands of Europeans, both on administrative and on technical grounds. In his opinion Europeans were more efficient administrators. Some Indian Engineers had an exceedingly good technical knowledge but were less able than the Europeans to put it into practice. He could not say how many Indians had risen to administrative rank, as the Provincial Service had not been long enough established and Provincial Service Engineers would only be just reaching the stage of promotion to the rank of Superintending Engineer. Many of the old Rurki Engineers, Indians, Anglo-Indians and domiciled Europeans, had risen to administrative rank. If it were not feasible to have a Central College in India, it would be a good thing to co-ordinate the work of the various Colleges.

71,298. (Mr. Madge.) There had always been Anglo-Indians and members of the domiciled community at Rurki, but he understood that the primary reason for establishing Rurki was to provide for Indians in India, just as Cooper's Hill was established to supply Europeans in England. Domiciled Europeans and Anglo-Indians wishing to rise beyond the level of the Provincial Service could go to England for their training, though he admitted there might be men who had not the means to do so. To assist such people to get into the Imperial Service he did not see why a system of scholarships should not be established for statutory Natives of India.

71,299. With regard to temporary Engineers, the witness said the temporary Engineering establishment was organised on a quasi-permanent basis and was intended to eke out the deficiencies of the permanent establishment. The cadre was based on the number of superior appointments, and as the cadre was now constituted, the numbers of Executive and Assistant Engineers were almost equal. But every divisional appointment carried on an average from 2½ to 3 sub-divisions and consequently there was not a sufficient number of Assistant Engineers to man more than one out of every three. The upper subordinate establishment was intended to man the remaining sub-divisions, but in practice it was found impossible to get a sufficient number of qualified upper subordinates, and temporary Engineers were therefore employed in many of these permanent posts. As the cadre was now calculated it was intended that Assistant Engineers should reach Executive rank after ten years' service. If there were sufficient Assistant Engineers to hold all the sub-divisions, many of them would take much longer than ten years to get a divisional charge. Even as it was, there was a block in promotion. On the other hand an increase of divisional charges would allow of an increase being made in the number of Assistants, and this would tend to reduce the number of sub-divisional charges held by temporary Engineers. The forty-two extra appointments that had been sanctioned would go a very little way to meet the difficulty and a still further increase would be required.

71,300. With regard to training, there was no reason why the training in India should not be raised to the highest possible standard, and he advocated that it should be so raised in the interests of the country. He thought Rurki did provide a sufficiently good training now, but England provided a better.

71,301. One Central Institution to cater for the Department would no doubt be a good thing, but he believed the divisions in India necessitated having more than one Central College. The Provincial Government of Madras might prefer to retain its own Institution. At present the Government of India made no appointments in Madras.

71,302. The witness considered that Anglo-Indians were fairly good at their work and generally discharged their duties with satisfaction.

71,303. (Mr. Macdonald.) The witness said that in advocating an increase of the cadre he had not considered the possibility of substantially diminishing the work now being done, building work for instance, in Provincial towns, and of handing this work over to ordinary private agencies. He did not think the number of Engineers in India in private practice was very considerable. No doubt the fact that the work was done by the Public Works Depart-

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ment tended to diminish the number of Engineers in private practice.

71,304. As a rule the Department framed an estimate of the cost of a work and called for tenders. Work was occasionally carried out by departmental labour, but, as a general rule, tenders were called for all work of magnitude. If a hospital had to be built in England the medical authorities would lay down their requirements and the Public Works Department would have nothing to do with the matter. In India the Public Works Department would be responsible for designing the hospital and for supervising the carrying out of the work. As Government money was spent on the hospital it was necessary to have a Government Officer in the position of Clerk of Works. The supervision of building work formed but a small fraction of an officer's duties; he had besides to construct and maintain roads, bridges, etc. There might be cases in which the building under construction was large enough to employ the whole time of Public Works Department officials and he admitted that in a case of that kind there might be a saving if the work was entrusted entirely to private agency. He doubted very much whether the appointment of temporary Engineers as Clerks of Works for twelve or six months would materially reduce the staff of the Department. In some cases this was just what happened now. For instance, if the construction of a large canal was sanctioned, thirty or forty Engineers would be employed on it, and when the work was over they would be discharged. The difficulty of late years had been to get temporary Engineers. The witness said his proposal for an increased cadre was put forward with the idea of getting a larger percentage of the men employed in permanent posts. He did not think it would be possible to carry out large works in accordance with the system adopted in England. The employment of a temporary Clerk of Works on a building might reduce the establishment by a few men but it would be a very small saving.

71,305. With regard to conditions of salary, the witness said he assumed that a man recruited to the Department had a right under his terms of recruitment to obtain a divisional charge in his eleventh year. That was part of the obligation which the State was under and the cadre was based on that. It was probably not a legal contract with the individual, but it was a moral contract. If a man did not get the charge he ought to get the pay of the charge. When the pay of the various grades was fixed every care was taken to recruit the establishment in such a way as to ensure a normal flow of promotion. Possibly a man has no grievance at law if he were not promoted. In the old days an Engineer did not rise to a divisional charge until after fifteen years' service, and that caused a good deal of discontent. He himself was blocked for nine years. It was true the Secretary of State had laid down specifically that unless a man had charge of a district he was not to rise above Rs800 a month, and everybody now knew the conditions.

71,306. With regard to privilege leave, the witness said it was the desire of the Service that leave should be allowed to accumulate beyond three months. At present a man accumulating three months' privilege leave did so at his own risk, Government only guaranteeing one month per annum which might or might not be accumulated for three months. An extension beyond the three months to four or six was possibly not in accordance with the fundamental intention of privilege leave, which was meant to provide a short rest once a year. The general idea of the Service was that if a man earned four months' privilege leave there should be no arbitrary restriction against his taking it. It was within his power to take a month each year, but if an officer chose to have no leave for five years and to take five months in the sixth year he did not see why he should be prevented.

71,307. (Mr. Fisher.) With reference to the paragraph in the written statement that "construction may involve the creation of twelve or more superior posts, which as long as construction is in hand are deemed temporary appointments and as such are excluded from the superior posts on which the cadre is calculated," the witness said that what he had in

mind was a scheme such as the Triple Canal project which required a certain number of officers for its upkeep after it had been constructed. Work of that sort might require fifty or sixty officers during the construction period and when the work was completed it would provide for a considerable number of permanent charges.

71,308. With regard to the advantage of Engineering training in India and in England, the witness pointed out that the training of an Engineer was both theoretical and practical, and the theoretical work could be better done in an English University than at Rurki. He based that opinion simply on observation. The newly recruited Indian College Engineer when asked to do a simple calculation, such as calculating the size of a beam to carry a certain weight or making an elementary stress design, frequently did not know how to set about it, but the average man from England had learned how to do calculations of this kind though he had not had occasion to apply his knowledge. For the first two or three years the Rurki Engineer was a better man owing to the fact that he had received practical training in work more closely akin to the work he would have to do afterwards; he knew the conditions of the country and the language how bricks were made in India, and various other things which the man appointed from home did not know. As a matter of fact, the man appointed from home probably had to unlearn a great deal. Many branches of Indian Engineering work such as Irrigation could not be practised at home. In many respects practical work in India was carried out differently from the way in which it was done in England, and the Rurki man was acquainted with the methods of Indian Engineering practice. If the same educational facilities could be obtained in India as now existed in England, it would be more useful to have an Engineer College for Englishmen in India.

71,309. (Mr. Sly.) The present idea was to select men in England not only on technical qualifications but with regard to social status, and he himself attached considerable importance to a man being of the right social status. It might be feasible to have open competition in technical engineering subjects as between the students of different Engineering Colleges in England, and he thought the position a student took in the Honours School of an Engineering College in England depended solely on the results of the final examination and not on the record of the student during his Course. He did not see that there would be any difficulty in marking students who had specialised in different branches of engineering, and he saw no practical difficulties in the way of holding an open competition in Engineering subjects.

71,310. The witness said he saw no reason why an Engineer should be forced to go at the age of 55 as long as the rule was made applicable to future entrants and was applied to other Services.

71,311. With regard to pay, there had been a very substantial improvement in the pay of Chief Engineers in 1905. The pay formerly authorized was Rs. 2,500 for first class Chief Engineers, Rs. 2,000 for the second class, and Rs. 1,800 for the third class. The latter class was abolished and the pay of the other two increased by Rs. 500, but he did not consider that sufficient. He thought it would be better to have only one class of Chief Engineer because they all did the same work. The Secretaryship to the Government of India was raised from Rs. 3,000 to Rs. 3,500 in 1905, and he recommended it should be now raised to Rs. 4,000 on the ground of the importance of the work.

71,312. (Mr. Gokhale.) The witness's statement that the Provincial Service had not attracted to the Indian Colleges the same class of men as formerly went to them applied only to Rurki as he had no personal knowledge of other Colleges. If, instead of creating the Provincial Service, the Government, in 1895, had passed orders to the effect that recruitment in India was to be increased and recruitment in England diminished, he thought the Service would have suffered in time, in spite of the fact that the proportion of Indian recruited men who rose to high administrative charges was greater than the proportion of men

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recruited in England. Without testing it witness could not accept this statement as a fact. The fact that for a certain period a number of Rurki trained Engineers rose to administrative ranks did not necessarily indicate that the Public Works Department could do without a leavening of European Officers. The appointments to the administrative grades were really made by seniority unless a man was absolutely useless. The number of men who were declared to be unfitted for promotion to Superintendent Engineers was not great. In witness's opinion the average man appointed by the Secretary of State was a more capable administrator, but he did not think he could establish that view by tracing the official careers of individual officers. In his judgment no political considerations were involved in making appointments to the Department, and therefore the men who had the best education in Engineering should be employed whether they were found in England or in India.

71,313. With regard to the training at Rurki and other Colleges, the witness said the training at Rurki was good but he did not know anything about the other three Colleges; he had always understood they were not so well equipped as Rurki. He believed the Government was doing all that it was possible to do to raise the Indian Colleges to the highest state of efficiency. He did not hold the view that a larger proportion of men should be recruited in England for the higher offices simply because the Public Works offered a good career for young Englishmen. He put it forward in the interests of Engineering work in India. He had no doubt, if a private meeting of the Commission was held, he would be able to substantiate his remarks as to relative efficiency by tracing the careers of individuals, or at least be able to specify a number of men who were relatively inefficient and among whom there would be a greater proportion of Indians than Europeans.

71,314. (Mr. Chaulat.) The witness said he would have no objection to an experiment in competitive examination among students of all the Engineering institutions of Great Britain. No instances of defects in the present system of selection had ever come to his knowledge. Under the system in force at Rurki it was possible for a man who had come out first at the end of the three years' course to be superseded by a man who had come only tenth on the examination list at the end of the first year's apprenticeship. Ultimate selection depended on the reports received from different officers. Men who were number 1 and number 9 on the examination list might be sent to Burma and Burma would select between the two and No. 9 might be selected in preference to No. 1. The report received about No. 1 from Burma might be much better than the report received with regard to Nos. 3 and 5 who had gone to the United Provinces, and yet No. 1 might be rejected. Rejected apprentices might get appointments as Temporary Engineers. For some years the number of students at Cooper's Hill had exactly corresponded to the number

(The witness withdrew.)

H. J. HOFF, Esq., Executive Engineer, United Provinces.

Written Statement relating to the Public Works Department, being a Memorandum by the United Provinces Local Secretary to the Civil Engineers' Association, representing the views of the Imperial Service Engineers of the Public Works Department of the United Provinces.

71,320. (I.) Method of Recruitment.—(1) The present system of recruitment by selection is generally considered satisfactory, but should be limited to candidates who have resided for at least seven years in Europe. There is a disadvantage in recruiting Indians in England, as it is not always the most suitable candidates who are willing and can afford to go to England. Moreover it tends to lower the standing of Indian Engineering Colleges, and causes discontent among his confrères for a fellow to be ever afterwards classed as an imported Engineer merely on the strength of a short education in Europe. It is too late in life for a youth of eighteen to acquire the British spirit from three years' residence in England, and European engineering methods could be better studied later on under the Study Leave Rules.

of appointments to be filled in India four years later.

71,315. On the subject of training, he thought the Indian trained at Rurki was less able to apply his theory to practice, and it was therefore desirable that he should be given an opportunity of practical work to show how he was likely to turn out.

71,316. With reference to the proposed increase of salary for Chief Engineers, the witness said that his suggestion was put forward partly on the ground that all Chief Engineers should receive the same pay and partly in order to avoid the anomaly of a senior officer in one Province drawing less emoluments than a junior officer in another Province. He was not prepared to apply the same principle to the grades of Executive and Assistant Engineers, if it meant paying an Indian Assistant Engineer the same emoluments as a European Assistant Engineer. He would not advocate that even in the case of Chief Engineers. He did not see how it was possible to avoid a higher paid officer working occasionally under a lower paid officer.

71,317. (Sir Theodore Morison.) The witness said that before becoming Secretary to the Government of India he was Chief Engineer in Burma. As an Executive Officer he served twenty-five years on the Punjab Irrigation and in Burma he was employed on buildings and roads.

71,318. With reference to the question of recruiting Indians with an English training, the witness said they would have to be appointed to the Provincial Service by the Secretary of State. He thought that the discontent and heart-burning in the Service were somewhat less aggravated than might be gathered from the written statements that had been submitted to the Commission. He could quite understand the arguments for putting everybody on an equality, and probably there was some legitimate cause of discontent, but he did not think it was acute. His own view was that the question of salary was not the chief cause of discontent, at least, among Indians.

71,319. Asked whether it would be possible so to organise the Service so as to ensure that Officers were graded according to the class of work they had to perform, the witness said that in practice they endeavoured to do that now. The Provincial Executive Engineer was given what was considered to be a suitable charge, usually a division where the work did not require high technical skill, but at any time the division might become an important one, so that it was impossible to earmark charge. It would be difficult to keep a Provincial man always in charges that were ranked as Provincial for the time being. When a Provincial man reached divisional rank it was usually arranged that he should be given a suitable charge. It was possible that a classification better than the present one would be an Imperial Service with a Provincial Service with a position corresponding to that of the Provincial Civil Service, and in that case Indians would be recruited into the Imperial Service in England.

(The witness withdrew.)

(2) One year's practical experience on works in Europe, and some knowledge of accounts should be insisted on.

(3) Every candidate should have been at a recognized Engineering College for at least three years, where he would have rubbed shoulders with other fellows of his own standing, and, at the end of his course of study, have obtained a diploma or other degree which is accepted by the Institute of Civil Engineers as qualifying for their associate membership. The A.M.I.C.E. Examination in itself is not considered a sufficient qualification.

(4) The selection Committee should consist of:—

(1) A retired Lieutenant-Governor or Chief Commissioner as president.

(2) An eminent Engineer with considerable experience in England, preferably a past President of the Institute of Civil Engineers.

(3) An eminent Principal or Professor of an Engineering College of high standing in England.

(4) A recently retired Engineer of the Indian Public Works Department.

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(5) An Indian Public Works Department Engineer actually in service, selected from the men who are at home on leave each year.

(5) The most suitable age for recruits to come out to India is between 22 and 24 years.

(6) There is great resentment in the Department at the appointment of Royal Engineers and Temporary Engineers to the permanent scale above the heads of men already in the Department. They should come on to the permanent scale only at the bottom of the list. The Royal Engineer anxious to enter the Public Works Department should make up his mind early in his career, and enter with his contemporaries. This rule should admit of no exception.

(7) For recruitment in India, the Colleges for Engineers should be separate from those for subordinates. It is not desirable that members of the superior service should live on intimate and familiar terms with subordinates, yet this undoubtedly happens, and it is encouraged by the two classes being educated together at the same College. Entrance to the Colleges should be by selection, combined with a qualifying examination.

(8) The present system of deputing two Indian College students for one appointment, vide P.W.D. Code, Vol. I., para. 151, and placing them for practical training under different officers is objectionable and dangerous. The qualified candidates should be appointed as Probationary Assistant Engineers and allowed to qualify by practical training for confirmation. The age for confirmation should be the same as for Engineers appointed from England.

71,321. (II.) System of Training and Probation.—It is felt that the present system of Departmental examinations is sufficient, and that Engineers appointed in England attain to an adequate proficiency in the Indian languages. The Examination in reading Native accounts might well be dispensed with, as the figures can be learned in a short lesson, and are afterwards soon forgotten.

71,322. (III.) Conditions of Service.—(1) It is desirable that the Engineers of the Department be constituted into a service under some such name as the "Indian Service of Engineers" (I.S.E.). The term Public Works Department is used by both subordinates and clerks, and consequently cannot be held to distinguish an Engineer Officer. This would only be following the lead set by other Departments, such as the Educational, Medical and Forest Services. It is felt that the table of precedence should be revised, so as to give Engineer Officers an official status more in keeping with their importance to the prosperity of India.

(2) All Officers should be compelled to retire on attaining the age of 55 years, without exception. The relaxation of this rule in recent cases has led to a large amount of discontent.

(3) The rule which lays down that a Chief Engineer should not be allowed to hold the same post for more than five years should allow of no exceptions.

(4) It is desirable that Government should weed out members of the Department, who are reported on as unsuitable or inefficient. A man, who has been reported on unfavourably for two consecutive years, should be warned that if he does not prove himself efficient, his services will be dispensed with. If, after another two years, he is still found unsuitable, then he should be compulsorily retired under the ordinary gratuity or pension rule allowed for men who are compulsorily retired as invalids. Of these four unfavourable annual reports, at least three should be by different Superintending Engineers.

(5) The employment of Temporary Engineers should be reduced to a minimum, as in many cases they hold Divisional charges, in which qualified Assistant Engineers would otherwise be officiating. Moreover, it creates a discontented class of men, who have a very real grievance, in that whilst doing the same work as permanent Engineers, they draw no extra pay, and have very precarious prospects.

(6) In order to ensure a regular flow of promotion, recruitment should be regulated so as always to make up the number of Assistant Engineers of less than eleven years' service, as nearly as possible to the number required to give a proportion of five Assistant Engineers to each four Divisional charges in the

Province. This proportion should be the same for both Engineers appointed in England and in India. The remaining sub-divisional charges should be held by Sub-Engineers and experienced and senior Upper Subordinates.

(7) An Officer transferred from one station to another should be reimbursed the whole of his actual expenses incurred in transporting himself and his family, servants and belongings. Under the present rules, men with families are often severely crippled by the heavy expenses of a transfer.

71,323. (IV.) Conditions of Salary.—(1) The system of annual increments in salary meets with general approval.

(2) The present scale of annual increments in salary as far as it goes is generally considered sufficient for an Officer's immediate needs, but it does not permit of an officer saving as much to eke out his totally inadequate pension, as he had every reason to expect from the conditions existing when he joined the Department.

(3) The rule introduced in the Government of India's resolution of the 15th May 1912 by which an officer cannot draw more than Rs. 800 a month under the system of annual increments till he is appointed to a Divisional charge, will bear very hardly on some officers, and should certainly be rescinded in the case of those officers who are reported on as fit for a Divisional charge. It is not right that the annual increments of an efficient officer, who is reported on as fully qualified for a Divisional charge, should be stopped, not on account of any fault of his own, but solely due to erratic recruitment. Similarly, an Indian Engineer, who is reported on as fully qualified for a Divisional charge, should be allowed to draw increased salaries beyond Rs. 535 a month, according to the scale of annual increments, without consideration of whether he is actually in charge of a Division or not. Similarly, many Executive Engineers, reported on as fully qualified for administrative rank, will be unduly held back at Rs. 1,250 a month, merely because of errors in recruitment. There is a strong feeling that Executive Engineers, who are certified as fit for Administrative posts, should have their pay increased beyond Rs. 1,250 a month by annual increments of Rs. 50 a month up to a maximum of Rs. 1,500, which they would thus attain after a minimum of twenty-four years' approved service. Similarly, Indian Executive Engineers, who are certified as fit for Administrative rank, should have their pay increased beyond Rs. 850 a month by annual increments of Rs. 35 a month up to a maximum of Rs. 1,025, which they would thus attain after a minimum of twenty-four years' approved service.

(4) Promotion to Chief Engineer, 1st Class, becomes so badly blocked at present, that many specially deserving officers never obtain a chance of promotion to the higher rate of pay. It is felt there should be only two classes of Superintending Engineers, and one class of Chief Engineer, as for Commissioners of a Division in the Indian Civil Service. The rates of pay of Administrative ranks should be:—

	Engineers appointed in England. Rs.	Indian Engineers. Rs.
Superintending Engineer, 2nd Class	1,750	1,500
Superintending Engineer, 1st Class	2,000	2,000
Chief Engineer	2,750	2,750

And a Secretary to a Local Government or Administration should get a local allowance of Rs. 250 in addition, as at present. The number of Superintending Engineers in the 1st Class should be the same as in the 2nd Class. The extension of the system of annual increments to the Administrative ranks would be a mistake.

71,324. (V.) Conditions of Leave.—(1) The amount of leave allowed under the existing rules is generally considered sufficient, but it is sorely felt that it is impossible to take as much furlough as is desirable for proper health, owing to the smallness of the furlough allowances. The present allowance is barely a subsistence allowance for a junior officer, and leaves no margin for expenditure in attending professional lectures or visiting Engineering Works. An officer,

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who is keen on improving his professional qualifications and bringing his knowledge up to date in European practice, is thus discouraged. At present the most junior Royal Engineer officer in the Department gets a leave allowance, which a Civil Engineer can only hope to reach after eighteen years' service. It is unanimously urged that the leave allowances should be revised so that an officer on furlough or special leave will draw half his substantive salary subject to the minimum of £500 a year, which is at present laid down for the Indian Civilian and Military Officer subject to the Civil Leave Rules.

(2) The opinion is also strongly expressed that it should be open to every officer to take all the privilege leave which he has earned at any time during his service, when he can be spared. It is unjustifiable that an officer should be penalised because he cannot be spared, or because, in his keenness for his work, he may prefer to see his job through instead of applying for leave when three months happen to be due to him. Privilege leave once earned is as much due as an officer's pay, and the rules should be framed in such a manner that it can never be lost to him.

(3) Furlough cannot be taken till an interval of not less than eighteen months has elapsed since last return from privilege leave of over six weeks' duration. This rule should be relaxed, as it discourages an officer from taking privilege leave in India, when it may be very necessary for his proper health.

(4) A proposal which is unanimously urged is that an officer on furlough should be allowed to draw double furlough allowances for half the period of furlough which is due to him. For instance, that an officer with twenty months' furlough due to him, should be allowed to take ten months' furlough on double the ordinary furlough allowances, and end up with no balance of furlough due to him; or to take any less period, say six months, on double the ordinary furlough allowances, and end up with a balance of eight months (twenty months' less twice six months) still to his credit.

(5) The principles laid down in the foregoing subparagraphs concerning leave have already been recommended by the Decentralization Commission, and might well be adopted. They amount to the opening of a ledger for each officer showing on the credit side the amount of leave earned, against which he can draw at any time and in such a manner as suits Government and his own interests. It is felt that no useful purpose is served by the rule which lays down that an officer must have rendered eight years' active service before he can be granted furlough. It would be in the interests of the service to give a junior officer an opportunity of recruiting his health, or of renewing his acquaintance with the progress of his profession, by allowing him to take furlough after four years' active service. Similarly, it is felt that private employment during furlough should not be prohibited, as it would give a keen officer an opportunity of gaining experience to the interests of the Service.

(6) Opinion is unanimous that the rules for the grant of study leave to officers of Scientific and Technical Departments should be extended to officers of the Public Works Department. Engineering is a progressive science, and it would be to the advantage of Government if officers were allowed periods of study in order to keep abreast of modern developments.

(7) The Indian Service leave rules should be abolished, and there should be the same leave rules for all officers of the Department.

71,325. (VI.) Conditions of Pension.—(1) The greatest grievance of the Department, and one which is sorely felt, is the totally inadequate pension to which officers become entitled on retirement under existing rules. The present pensions are actually less than they were forty years ago, and when the higher qualifications now required from men joining the service, and the general rise in the cost of living are taken into consideration, they compare still more unfavourably than the actual figures indicate. It is strongly urged that the Memorials on this subject recently submitted by a large majority of the officers of the Imperial Service, should receive early and favourable consideration. Numerous Memorials on this subject have been submitted during the last six years, and

the delay in the issue of first orders on the case has given rise to a considerable amount of discontent. The Engineer appointed in England is expected to live in the same style as the Royal Engineer and the Doctor, and there is no reason why he should be able on retirement to arrange his home menage on a more economical scale than they. He claims equal treatment from Government in the way of pension.

(2) Article 4 of the Civil Service Regulations lays down that an Officer's claim to pension is regulated by the rules in force when he retires. In view of the delay in the issue of final orders on the Memorials already submitted, it is urged that this rule should be held in abeyance in the case of those men who are compulsorily retired before final orders are issued.

(3) The scale of invalid Pensions is meaningless at present owing to the absurdly low maxima limits prescribed, and opinion is unanimous that the maxima limits, as laid down in Article 641, should be revised to agree with those shown in Article 474 of the Civil Service Regulations.

(4) A large majority of the Engineers appointed in England consider that a family pension scheme should be started, and that Government should bear a portion the cost. Pension has been officially laid down to be deferred remuneration, and consequently it is clearly the duty of Government to reimburse this deferred remuneration to his family in all cases when an officer dies before he has drawn it all in the shape of pension. The majority of men are willing to contribute $6\frac{1}{2}$ per cent. of their salaries towards a Family Pension Fund, and it is felt that Government should also contribute an equal amount. With this datum, the amount of family pensions, payable in the event of an officer dying, should be worked out on an actuarial basis, allowing five per cent. per annum compound interest. Bachelors would subscribe at the same rate as married officers with families, and as a set off they might be allowed to make voluntary subscriptions to a Provident Fund, and receive five per cent. compound interest thereon.

71,326. (VII.) Division of Services into Imperial and Provincial.—(1) It is undesirable to lay down definitely that certain fixed Divisional charges, or even a fixed proportion of Divisional charges should be reserved for Provincial Engineers, as laid down in the Government of India Resolution of the 24th of April 1908. Provincial Service Engineers being borne on the same list as Imperial Service Engineers, the appointments to Divisional charges should be by selection only.

(2) It is felt that, in the interests of efficiency, the proportion of imported Engineers in the Service should be for the present not less than sixty-six per cent.

(3) It is agreed that Engineers of the Imperial and Provincial Services should be borne on the same list, but it is felt that the principle laid down in Article 85 of the Civil Service Regulations is fair and equitable, i.e., that an officer serving in his Native land should get only two-thirds of the pay he would draw while working outside his Native land. It is an economic fact that imported labour has invariably to be paid more highly than home labour, and there is no reason why India should pay the same for her Native-born Engineers, as the Secretary of State has to offer to the pick of English Engineers in order to induce them to serve in a foreign and distant clime. The Englishman serving in India is not working under the same conditions as the Indian, inasmuch as he cannot live so cheaply, and is exposed to adverse climatic conditions. He has also to bear the expense of long and expensive journeys home periodically for himself and his family. Education for his family in England costs considerably more than education in India. The case is complicated by the presence of a small body of the domiciled community in the ranks of the Provincial Service. These men have English habits, and undoubtedly labour under hardship and discontent, but no reasonable remedy has been suggested. Having made their domicile in India, they must throw in their lot with His Majesty's Indian subjects. The scale of pay laid down for the Provincial Service is undoubtedly sufficient for the pure Indian, and certainly attracts Indians of high attain-

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ments. A great deal of the discontent in the Provincial Service is due to certain men, after failing to get an appointment to the Provincial Service, having subsequently obtained an appointment to the Imperial

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71,327. (Chairman.) The witness said he was Executive Engineer of the Cawnpore division of the Lower Ganges Canal, and he represented the views of the Imperial Engineers in the United Provinces. He also acted as Local Secretary to the Civil Engineers' Association in the United Provinces.

71,328. The witness said the chief points in his written statement related to leave allowances, pensions, and the desirability of establishing a Family Pension Fund.

71,329. With regard to recruitment, instead of the present policy of recruiting about 30 per cent. of the superior Service in India and reserving 10 per cent. of the remainder for selection by the Secretary of State in England, he would abandon recruitment of Indians in England and substitute in its place recruitment in India from the Indian Colleges. Under his scheme recruits in India would be appointed to one-third of the vacancies in the department. He meant no retrograde step, as this proportion of Natives of India was about the same as existed in the United Provinces at present, and he meant it to be the same. As to recruitment in England, he insisted on a seven years' domicile with a view to discouraging the Indian from going to England, as he believed the recruitment of Indians in England was in part responsible for the discontent that now existed. He thought it would be better for all Indians to be recruited direct in India, and it would assist the Indian Colleges if this principle were enforced.

71,330. The witness did not consider the present qualification of the A.M.I.C.E. examination was sufficient in the absence of a residential course in a College for the formation of character. He thought the majority of officers now in the Service had gone through a residential course of three years and a year's practical training, and he wanted to insist upon that for everyone. At present there was no probation for Imperial Engineers. The senior men were in favour of such probation but the junior men were not, as they considered the terms of service were not good enough to attract candidates into the department as probationers. They were under the belief that a probationary period would adversely affect recruitment, but the witness agreed that a good man would not be deterred from coming into the service by any consideration of that kind.

71,331. With reference to recruitment in India, the witness said he would substitute for the present competition for entrance to the Indian Colleges, a system of nomination followed by a qualifying examination. Nomination would ensure physical fitness and respectability, and the due representation of the various castes. He thought it necessary to prevent an undesirable predominance of any caste in the Service. He did not think a qualifying examination would result in their obtaining students of lower intellectual calibre. He would abandon the present system of appointing two apprentices in each Provincial Service vacancy. He would appoint only one man in each vacancy, and if any of the probationers failed to qualify for confirmation, the deficiency in staff would have to be made good in the following year. The present system produced very great anomalies.

71,332. With reference to salary, his proposal was that an officer who was reported to be efficient should be allowed to advance by annual increments to Rs. 1,500, but if not thoroughly fitted for an administrative post, he should stop at Rs. 1,250, and if not fully qualified for the charge of a Division, he should not rise above Rs. 800. His proposal went on the assumption that an officer believed that at a certain period of his career he would be in possession of a charge, but he admitted that the Government had not given any pledge of that kind. An officer, however, when he entered the service certainly expected to get a division in ten years. It was important that the idea should not get about that Government was benefiting by its own mistakes in recruitment.

Service. It is felt that a recurrence of this discontent could be avoided by limiting recruitment in England to candidates who have resided for at least seven years in Europe.

71,333. The witness said that the number of administrative and Executive posts asked for by the Local Government in the revised cadre, after allowing for expansion, was 63. Recruits appointed in 1913 would not get charge of divisions till after seventeen years' service. Unless the rule was changed, they would be blocked at Rs. 800 for about seven years.

71,334. The witness thought it would be a mistake to extend the system of annual increments to officers in the administrative ranks. It was necessary to make promotions to the administrative grades by selection.

71,335. Royal Engineer officers, witness considered, should enter the cadre at the bottom of the list and should not be put over the heads of Civil Engineers. There were some instances of Royal Engineers being placed over the heads of Civil Engineers, and many officers were discontented in consequence.

71,336. The retention of officers after the age of fifty-five resulted in a block of promotion, and this had caused a great deal of discontent. He thought it was to the benefit of the public that there should be an even flow of promotion and that blocks should be prevented.

71,337. With reference to the suggestion in his written statement that the Indian Service leave rules should be abolished, the witness admitted that there were certain conditions which might be taken into account in deciding whether the same leave rules should apply to Indians and Europeans, but he recommended that they should not be taken into account. He desired to help the Indian to go to England at a later stage of his career in order to make himself acquainted with work there, and he would be encouraged to do so if there were uniform rules as to furlough. The only difference he would make would be in the case of a man who spent his furlough in India instead of in England.

71,338. In connection with the proposal for a Family Pensions' Fund, the witness said pension was considered to be deferred pay, and if an officer died, the pension he had earned by service was lost. Government forced officers to subscribe to the Provident Fund and therefore recognised that it was a man's duty to make some provision for his wife and family. He and his colleagues would welcome the establishment of a Family Pension Fund even if Government made no contribution to it. His own idea was that the Family Pension Fund should be in substitution for the General Provident Fund. It was essential that every Imperial Engineer should subscribe a percentage of his salary to the proposed fund from the day he joined the service.

71,339. (Mr. Gokhale.) The witness was of opinion that lately a few officers had been recruited to the Department from England who had received a training inferior to that obtained at Rurki. He did not think the best teaching possible in India was equal to the best teaching obtainable in England. An Indian educated in England should be appointed to the Provincial Service, because he did not think an Indian would obtain sufficient benefit from a three years' course in England to entitle him to join the Imperial Service. For that it was necessary that he should have been educated in an English Public School.

71,340. With reference to his statement that Engineers recruited in India did not possess the British spirit in the same degree as Imperial Engineers, the witness quoted the following extract from Sir Valentine Chirol's book on *Indian Unrest*: "Until quite recently the educated classes have held almost entirely aloof from any but the liberal professions. Science in any form has been rarely taken up by University students, and for every B.Sc., the honours lists have shown probably a hundred B.A.'s. The Indian National Congress itself, as it represented mainly these classes, naturally displayed the same tendencies, and for a long time it devoted its energies

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to so-called political problems rather than to practical economic questions. Hence the almost complete failure of the Western educated Indian to achieve any marked success in commercial and industrial undertakings." He also quoted the following from the *Pioneer*: "The men who have entered the profession have not shown themselves conspicuous either in technical knowledge or in those essentials of character and sense of responsibility in emergencies and business and administrative ability, without which technical skill alone is of little avail." Those views were accepted by the Officers in the Public Works Department, and he put them forward as representing their ideas on the subject. What he implied by British spirit was grit, character, a sense of responsibility in emergencies, and business and administrative ability, and he claimed that men recruited in India were inferior in those qualities. Whilst he urged that nowhere in the world was home labour paid at the same rate as imported labour, he admitted that the application of that principle might entitle the Indian to insist on the further principle that as far as possible home labour only should be employed and imported labour employed only in exceptional instances. He thought however that 33 per cent. of the posts in the cadre was the utmost that could be conceded to Indians at present. He did not agree that before 1895 the men recruited in India, judged by the numbers promoted to administrative rank, were found to be as good as the men imported from England. It was economical as far as possible to officer the Public Works Department by men imported from England, but he would take in locally recruited men also as there were political reasons for encouraging Indians.

71,341. The four officers who subscribed to the original report were elected by the whole body of Engineers in the Province. He himself had been elected first, but had been unable to attend the conference. He had been nominated by Government as the representative witness.

71,342. (Mr. Sly.) The witness said the question of private practice for Engineers during service in India was not discussed by his colleagues but only the question of permitting private practice during periods of leave on furlough. He did not think that officers on furlough would in any case go in for private practice to any extent as their time would be chiefly taken up by recreation. If private practice during furlough were allowed he thought officers would become more efficient owing to the fact that they would get a wider knowledge of Engineering practice than they could possibly obtain in India. He did not think, however, it was an important point, and the demand would probably disappear when the officers became more contented with their prospects.

71,343. (Mr. Fisher.) With reference to his recommendation that there should be no exception to the rule which prescribed that a Chief Engineer should not be allowed to hold the same post for more than five years, the witness said his idea was that someone else should be given a chance and that the flow of promotion should not be blocked. In making the suggestion they were not thinking of the requirements of the Public Service except in so far as it was in the interests of the service to give regular promotion.

71,344. The witness said he received his own Engineering training at Cooper's Hill. He was not acquainted with the education given at Rurki and could not therefore make a comparison between Rurki and Cooper's Hill.

71,345. (Mr. Macdonald.) He had gone into the various minutes and despatches governing the scale of pay of the Department and had read the Minute of 1893. He was not able to say whether there was anything in that Minute which justified the statement that the Government had been recruiting with the idea that a Divisional charge should be given to an officer after ten years' service, but in the old days officers went up the scale whether they were in charge of a division or not. He agreed that the Minute of 1903 did not justify him in saying that Government had been recruiting on the basis of

promotion after ten years, but Mr. Russell had just now said they were. The Government gave no guarantee. He had not seen the advertisement of 1913 giving the scales of pay, and was not aware that it contained a foot-note that "Officers of the Assistant class will ordinarily pass into the Executive class at the eleventh year of Service, but no Imperial Engineer may draw more than Rs. 9,600 per annum unless he holds charge of a division or a charge of equal importance." He thought, however, that the word "ordinarily" was quite sufficient to make each man expect promotion after ten years, if he worked well. At any rate it would be owing to a mistake if there was not a division for him then, and Government should pay for its own mistakes.

71,346. (Mr. Madge.) The urgency for increasing the staff of Imperial and Provincial Engineers was due to the class of men now in charge of sub-divisions. He thought the work performed by Imperial and Provincial Engineers was on an equality. The education in Rurki he believed to be sufficient on the intellectual side, but he did not think it trained men for practical work as they could be trained in English Colleges. It was a general belief amongst Imperial Officers that the work of Provincial Officers who had been promoted to Executive rank was inferior.

71,347. There would be no objection to the employment of temporary Engineers on a purely temporary basis and provided they were not given charge of divisions.

71,348. The cadre should be so increased as to obviate a block in promotion to executive rank, as he did not think the number of divisions should be increased.

71,349. (Mr. Abdur Rahim.) The witness said he understood that the ordinary work of Sub-divisional officers employed on the roads and buildings was to make designs and prepare estimates, but unfortunately such a bad class of men was being obtained that this work had to be done by the Executive Engineers themselves. During the whole of the hot weather the witness had under him a sub-overseer at Rs. 70 a month and an overseer on Rs. 100 a month as his Sub-Divisional Officers. He had not been able to get his leave, because there had been nobody to do his work.

71,350. A large portion of the staff in the Irrigation and Roads and Buildings Departments was employed on maintenance work, and the sub-divisional officers were generally upper subordinates. It was not frequently the practice for an Assistant Engineer posted to a sub-division to obtain the assistance of an upper subordinate officer; generally he had no assistance at all.

71,351. (Sir Murray Hammick.) There was no arrangement in the United Provinces for providing a technical section at headquarters to undertake the larger designs and estimates. Every estimate was made in the divisions.

71,352. (Mr. Housden.) The witness desired that there should be the same leave rules for Imperial and Provincial officers; he desired to encourage the Indian to go to England on leave after having had some experience in India. On the Imperial list there were some Indian college Engineers who were under Indian Service rules for leave and pension. This caused a great deal of discontent, and the witness thought that such men should be put on to the same leave and pension rules as other Imperial officers.

71,353. When he said he did not think the number of divisions should be increased, he only meant to say that the proportion of sub-divisions to each division should not be decreased. The proportion was about 2½ sub-divisions to one division, and this was approximately right for the United Provinces.

71,354. He knew that Imperial Engineers had sent in memorials to Government asking for better pensions for Superintending Engineers and Chief Engineers. The present rule was that Superintending Engineers obtained an extra pension of Rs. 1,000 for three years' approved service but got nothing more unless they were subsequently appointed as Chief Engineers, and then only if they had been recruited before 1898. Witness asked that no dif-

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ference should be made between the pension of the Superintending Engineer and that of the Chief Engineer. If a man was blocked for promotion to Chief Engineer through no fault of his own it would affect his immediate pay, but it ought not to affect his pension. He thought the request that an increase in pension of £40 a year should be granted for each year of service in the administrative grades was a reasonable one.

(The witness withdrew.)

F. R. BAGLEY, Esq., M.Inst.C.E., Chief Engineer, Southern Punjab Railway.

Written Statement relating to the Public Works Department.

71,356. *Services of witness in brief.*—I joined the Public Works Department in 1871 with an Assistant Engineer's certificate from the Thomason College, Rurki, and worked as an Assistant Engineer in the Central Provinces, and on famine works during the Bihar famine of 1874, till, in July 1875, I was transferred to the Burma (State) Railways. For 23 years after, till July 1893, I worked on the Burma (State) Railways as Assistant Engineer, Executive Engineer, and finally, after 1891 as Engineer-in-Chief. From 1896 to 1898 I was lent to the Burma Railways Company as Chief Engineer. I returned to Government service in July 1898 as Engineer-in-Chief, and in January 1901 was appointed Chief Engineer of the North-Western State Railway (some 4,000 miles in length), which post I held till I retired on the maximum Chief Engineer's pension in September 1907. In 1908 I came out again as Chief Engineer of Construction for the Southern Punjab Railway Company and am still engaged in that capacity building railways in the Punjab.

My total service on works in India comes to over 40 years, during about 20 years of which I have held administrative posts as Chief Engineer. During that time I have come into close contact with nearly 500 Engineers, employed on the same works, or so near me as to give me a thorough knowledge of their qualifications and efficiency, and of this number some 200 have been directly under my orders as Superintending, Executive, or Assistant Engineers. They have been men of all ranks and recruited from all sources and I have good reason to believe that I am considered to have treated all with strict impartiality and to have been a good judge of character and efficiency and able to get out of each man the best work of which he was capable. References may be made on these points to the Government of India records.

I have given these details to show that my experience has been extensive enough to give me presumably a thorough knowledge of the qualifications and efficiency of the various types of Engineer officers in the Department. I take a deep interest in the welfare of the great Department in which I have spent a strenuous lifetime, and I offer to give evidence chiefly because I believe that in the present treatment of the "Provincial Service Engineers" and the "Temporary Engineers" there have been very serious mistakes made which will lead, unless soon corrected, to nothing short of disaster to the good name and efficiency of the service.

I shall take in order the "heads" under which remarks are called for, but to avoid confusion will deal separately with each of the three services into which the Public Works Engineering service is divided—

A.—The Imperial Engineering Service (to which appointments are made from England, or from the Royal Engineers in India).

B.—The Provincial Service (manned by passed students from the Indian Engineering Colleges, chiefly Rurki).

C.—The Temporary Engineer Service (appointments made in India on terms of one month's notice).

(A) THE IMPERIAL ENGINEERING SERVICE.

71,357. (I.) *Methods of Recruitment.*—I consider it a great pity that Cooper's Hill College was abolished, but the present system of selection in England from qualified candidates is the best possible, and has worked so far with excellent results. Under present

71,355. (Mr. Clarke.) The witness maintained that a man serving in a country which was not his native land ought to be paid more than if he were serving in his native land. If a Provincial Engineer was deputed to Europe he would only obtain under Article 85 of the Civil Service Regulations two-thirds of the salary he was drawing in India, but the witness recommended that, as a native of India, he should get more.

circumstances of supply of the likely material in India I think it is desirable that at least half the appointments should be made from England now and for some time to come. It will be possible to make a larger proportion of the appointments in India when the terms are made good enough to tempt the best class of domiciled European and Anglo-Indians, and of the Indians (a small class) to whom this kind of service is attractive. I shall explain later on, in dealing with the Provincial Service, my reasons for this opinion.

71,358. (II.) *System of Training and Probation.*—There is at present no systematic training and the probation is nominal. The so-called "practical" experience in England is generally a farce, and in no case of much use for Indian works. At the same time this matter of training in India is of essential importance to the usefulness and success of every officer. I have known several men with the makings of good officers in them ruined for life by their first service being on unsuitable work, or under careless or tactless superior officers, who have not troubled about teaching them the details of work, or the spirit in which it should be done, and in which native employees and labourers should be dealt with. At the best it takes something like 2 years for a man fresh from England who comes out, ignorant of the language and of Indian methods, to become really useful, and it is an urgent matter that during this time of training he should be on practical work where he will get experience in details under a sympathetic officer who, by example and influence, will interest him in his duties and teach him how they should be carried out. I have always made it a point, as far as it has been in any way possible, to put every new arrival on to a year or two of Survey and Estimating work, and then for two years on construction work, under the right kind of officer, and with very successful results, and this should always be done systematically.

71,359. (III.) *Conditions of Service* are satisfactory on the whole.

71,360. (IV.) *Conditions of Salary.*—The Imperial Service Engineers have lately been put on a time scale of salary effecting a considerable improvement and appear to be sufficient to attract the right type of man.

71,361. (V.) *Conditions of Leave* are satisfactory on the whole.

71,362. (VI.) *Conditions of Pension.*—Considering the importance of the work done by the Senior officers as acknowledged by the high rates of pay of the Chief Engineer and Superintending Engineer classes, there is no doubt that an improved scale of pension is called for. As a matter of fact, while the scale of pay has been recently increased, the maximum pension has been actually cut down to £525 a year, which is palpably out of proportion for a Chief Engineer drawing Rs. 2,500 to Rs. 2,750 per mensem. There should certainly be an approximation to the pensions laid down for services paying similar salaries, and the least increase that would be reasonable and satisfactory would be £700 a year for a Chief Engineer of 3 years' service in that rank and £600 a year for a Superintending Engineer of 3 years' administrative service. Considering that many deserving officers cannot be found vacancies in administrative appointments before they are superannuated a rule seems reasonable that men who would have received such appointments if vacant, and have always been recommended as fit for them, should get an extra pension of, say, £500 per annum. With these improvements

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it might fairly be said that the Imperial P.W.D. service would have every reason to be happy and contented.

71,363. (VIA.) **Limitations in the Employment of Non-Europeans.**—The necessity under existing rules of non-Europeans having to go to England for appointment to the Imperial Service is certainly a limitation, as few can afford the expense, but while as at present a large proportion of appointments must be made from England it is unavoidable, and the advantages of European education (apart from mere technical training) are so great that it is worth while retaining.

71,364. (VIIB.) **Division of Services into Imperial and Provincial.**—This division has been a most unfortunate and lamentable mistake, and it is chiefly to represent the urgency of its early abolition that I am proposing to give evidence. It will be more convenient to go into the subject in detail later, when considering the general case of the Provincial Service.

71,365. (VIII.) **Relations of the Service with the Indian Civil Service and other Services.**—In all the Provinces in which I have worked these are satisfactory. There was some friction I believe in the Upper Provinces and Bengal before District Board Engineers were instituted.

71,366. (IX.) **Other Points.**—I have no Special remarks to make on the Imperial Service beyond those given above.

(B.) THE PROVINCIAL SERVICE.

71,367. When I joined the P.W.D. in 1871 and for many years afterwards till 1889, the men appointed in India including those trained at Rurki and the other Engineering Colleges received after training and probation, practically the same rates of pay as all the other Civilian Engineers. The Military men from the Staff Corps and Royal Engineers then a larger proportion than now, received certain extra Staff and other allowances which was a legitimate grievance to the Coopers Hill and other Civilian Engineers, and a "Civil Engineers Association" was got up with the special object of removing this anomaly. It was joined by many of the Indian appointed men and the main text on which it preached for years was the "same work, same pay." No man who joined that Association can consistently do anything but acknowledge the injustice of a Provincial Service, in which the Indian appointed men while doing exactly the same work and on the same lists for promotion, receive only two-thirds of the pay, while so far as the Europeans and Anglo-Indians are concerned, they have to live on the same scale of expenditure. The Indian College Engineers' Association is now making an able representation on the history of the Provincial Service in which its genesis and the misapprehensions on which its institution was founded, and the alleged broken promises and injustice done, are fully described. I do not propose therefore to go into such details but to confine myself to the refutation of the fundamental error which led to the Government of India taking action in the matter.

(2) The Provincial Service in the Public Works Department was instituted on the recommendation of the Public Services Commission of 1885, which having laid down very good reasons for such a service in various other Departments, did not realise that in this case the circumstances were entirely dissimilar. They founded their recommendation on the ground of the "superior scientific education" of the men appointed from England; and show by their arguments, what I am obliged to call "the most unfathomable ignorance" of an Engineer's real duties, and of what the "scientific education" of a young Engineer, whether in Europe or India, really amounts to. I am aware of the objections to using too strong language, and of its detrimental effect on impartial judges if it is proved to be exaggerated and unreasonable, but I believe in this instance it can be shown beyond doubt that no terms can be too strong to characterise the gross misapprehension on which a Commission of able men made their recommendation, and it is still more amazing that the Government of India with more knowledge and the best intentions should have agreed to and acted on it. It is almost incredible that it should have been so, but so it was as I shall proceed to show.

(3) On referring to paragraph 119 of the Commission's report it will be seen that it is mentioned as a terrible thing that a Coopers Hill man should be condemned to labour on works "within the capability of men of an inferior standard of education" and be kept for 15 years "making bricks and lime and putting them together"! To anyone who knows anything of an Engineer's duties that is a terse and comprehensive description of Engineering work everywhere. Similarly, the Commission say with perhaps some truth that "some of the operations of the Department require the highest skill and training obtainable in England, and for control of a great department, qualifications are wanted which are not at present attainable in this country" and then they proceed to argue that the men "from Chatham and Coopers Hill receiving a higher standard of professional education than the best Indian Colleges are capable of affording," are capable of carrying out the aforesaid operations requiring the highest skill and training obtainable in England, while the Indian trained men are only good enough for "the ordinary work of the Department." Now could anything show more extraordinary ignorance of what a young Engineer's professional education really means and amounts to. The fact that "some of the operations of the Department require the highest skill and training obtainable in England" may be a very good reason for importing competent experts in such operations, but that the skill and training acquired at Chatham or Coopers Hill should make any difference for such purposes from that acquired at Rurki or elsewhere, is obviously a statement that proves a complete ignorance of the subject. In either case, the Coopers Hill man or the Rurki man or any young Engineer starting in life, however highly educated professionally, can only have a theoretical knowledge of the first principles of Engineering. One may be slightly better in higher mathematics, and another have a more thorough knowledge of surveying, but both are beginning their professional education by training in practical work. Neither will be fit for "operations requiring the highest skill" or the "control of a great Department" till after many years of experience, and there is not the smallest reason why one should then be more fit for these than the other if they are men of equal intelligence and practical ability.

(4) Now as a matter of fact I, who have had hundreds of young engineers passing through my hands from all sources, can certify that while the average Rurki man was not perhaps so good in higher mathematics or applied mechanics, he knew quite enough of these subjects to do such work as he would be called on to carry out in practice, and on the other hand he was a much more thoroughly trained Surveyor, and his knowledge of the language and of Indian men and methods gave him an actual initial advantage. By the time the Rurki man rose to be an Assistant Engineer, 2nd grade, he had had some 2½ to 3 years practical experience and was a long way ahead in usefulness of the newly arrived Coopers Hill man who joined in that grade and on the same pay. These are facts that no experienced and impartial Engineer in India can deny, and that the Rurki man became as fit for operations requiring high skill, and control of a Department as anybody else is abundantly proved by the actual performances of the Rurki men who joined the Department in my time and for some years after, until the institution of the Provincial Service made it no longer attractive to the best men educated in India.

(5) I have made out very carefully a list of all the Engineers with whom I have during my 40 years' service come into sufficiently close contact to enable me to form a judgment as to their efficiency as Engineers. These number in all more than 450 men of all ranks and from all sources made up as follows:—

(a) Royal Engineers	59
(b) Staff Corps	12
(c) Engineers under covenant (5 years)	17
(d) Stanley Engineers	32
(e) Miscellaneous appointments in India	30
(f) Rurki men	117
(g) Coopers Hill, and since	142
(h) Temporary Engineers	50

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All these are men with, or near, whom, I have worked and I give my personal opinion founded on actual experience. The figures showing that the number of Rurki men who actually rose to administrative rank was as large a proportion as in any other service, will be available no doubt from other sources, but as they might be considered the exceptions, I have gone carefully through all the men I have known well enough to judge, and divided them into three classes—above average, average, and under average, with the following results:—

	Above average per cent.	Average per cent.	Under average per cent.
(a) Royal Engineers	53	42	5
(b) Staff Corps	17	50	33
(c) Engineers under 5 years covenant	58	29	13
(d) Stanley Engineers	25	55	20
(e) Miscellaneous appointments in India	27	47	26
(f) Rurki and Indian College men	34	51	12
(g) Coopers Hill, and since	33	57	10
(h) Temporary Engineers	8	81	8

(6) It is not pretended that these figures are exactly accurate, and such are not possible, but they have been got out with an earnest endeavour at absolute impartiality. I am willing to admit all kinds of qualifications, which might affect the percentages to a certain extent, but I believe there can be no doubt that the Rurki Engineers who joined the Public Works Department while the service was considered worth entering, were as good for all practical purposes as the man from any other source, and had an equal proportion of men above the average fit for administrative, or exceptionally difficult executive posts. I think I have shown good grounds at any rate for my contention that the institution of the Provincial Service in the Public Works Department was founded on a complete misapprehension by the Public Service Commission of what an Engineer's duties are and what his education really means, also that as a matter of fact the men turned out from Rurki in the years before 1889 and for some years after were as competent, and deserving of the same pay, as those recruited from any other source.

(7) I have now to urge the strong reasons that exist for my opinion that the present state of things is in the interests of the Government intolerable and disastrous, and calls for very early and drastic reforms. The Public Service Commission in making their recommendations had the excellent intention of appeasing the discontent that existed amongst the Indian appointed men, who complained that, though doing the same work and drawing the same pay, they were at a great disadvantage in the matter of leave and pension rules. This discontent they proposed to allay by the very topsy turvy expedient of reducing the pay also while they continued to do the same work. In practice, as might have been foreseen, there has been since twenty times the amount of discontent that existed previously, and on very solid grounds. There was an idea at the time that the Provincial men could be kept, by themselves in certain unimportant divisions comprising "ordinary works" not requiring the "highest skill," but as any practical man could have foretold this was found to be quite unworkable. In practice, for important works the competent men must be selected whatever their origin, and in any large service any attempt to restrict the freedom of selection for vacancies that occur, would lead to a disorganisation of staff from frequent transfers that would be fatal to efficient management. No attempt is now made therefore to separate the sheep from the goats. They work together indiscriminately, with the result of anomalies of all kinds which make a contented Provincial Service man an impossibility. Very often a Provincial Executive Engineer has Assistant Engineers under his orders drawing much higher pay (I have known a case where the Assistant Engineer drew nearly twice the pay of his superior officer), and even when working together as Assistant or Executive Engineers the

man drawing the smaller pay for exactly the same work (while obliged to live on exactly the same scale of expenses) cannot be expected to do the contented and willing service which can alone be efficient service. It is argued that he entered the service with open eyes as to the conditions and ought to have known what to expect, but it is a weak argument. Youngsters of the age at which most men join do not think of such matters, cannot realise what the distinction will mean in practice, and find themselves in positions in which no man with self-respect can be satisfied.

(8) There is another argument, perhaps the most powerful of all, against the existence of the present system of a superior service on subordinates' pay. It is said by critics of the Indian appointed men that they have deteriorated in class of late years from the men who used to go to Rurki some years ago. I am not aware that there has so far been any very marked deterioration, though no doubt the most brilliant of the Indian educated boys are not sent there as they used to be, but with the prospects as bad as they are now it cannot be questioned that such deterioration is in time inevitable, and that there is grave danger of coming down sooner or later to men of inferior type with moral standards that unfit them for positions of trust. It is a delicate matter, but needs putting quite plainly. The Public Works is a spending Department, the officers of which control in every detail an enormous cash expenditure, and it is a necessity that they should be above suspicion as to their absolute honesty. This has been ensured on the whole so far, but what will happen when badly paid and discontented men coming from an inferior class find themselves in such positions exposed to the strongest temptations, anybody conversant with Indian standards knows quite well, and it is not necessary to go into further detail.

(9) No stronger reason can exist than those given above for an immediate reform of the present system of appointment in India to the higher ranks of the Public Works Department but there are farther strong considerations of policy against barring the doors of the higher service against indigenous talent of the right kind. There are, it is true, comparatively few educated Indians at present to whom a service presents itself as attractive in which many hardships and physical discomforts have to be encountered daily and much patient drudgery called for in the lower grades. The Indian Engineers of the future, and very brilliant ones, will be found amongst the artificer castes, trained to such work for generations, but there are yet few of these sufficiently advanced in English education to be successful in College competitions. The members of the large domiciled community however, showed themselves, while appointments worth having were available, to be particularly adapted for this profession and successful in its practice, and as an outlet for their best men it will be in every way an advantage to the State to restore the conditions under which the Indian Colleges sent out so many brilliant Engineers in the seventies and eighties. In this connection the subject is acknowledged to present certain difficulties which will be considered later under the head of "conditions of recruitment." I hope I have shown conclusively above, the evils of the Provincial system for the Public Works Department as at present existing, and its inevitable result if continued on the same lines, in an inefficient and untrustworthy service. Radical alterations are urgently necessary and I will proceed to indicate briefly what I suggest as advisable. But before proceeding farther I should like to explain that I have not forgotten that the Commission mentioned as reasons for the distinctions they recommended, not only the illusory "higher scientific education" obtainable in Europe but the advantages of "general English education and training" which I am quite ready to admit as most valuable in forming energetic and strong characters. I have therefore in my remarks above on what is now called the Imperial Service, proposed that half the recruitment should continue to be from England under present conditions. I am also willing to admit that there is something in the argument that the Indian trained Engineer gets his education so much more cheaply, that a difference in the rate of pay has some appear-

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ance of plausibility, but it is also clear I think that this difference should apply only to the initial pay for the first two or three years, by which time the man who has served his probation and practical training successfully has surely washed out the score. My recommendations for reform are therefore as follows:—*First*.—The name of the service should be altered; “Provincial Service” is in other Departments the description of a strictly subordinate service in which all the members join and work as subordinates under a superior class of officers, but it is not applicable to Public Works Engineers who join as officers and work as such with all the duties and responsibilities of other officers of the Department. *Secondly*.—My recommendation is in short, that we should return to the state of things substantially, that existed in 1871 when I joined the Department.

(10) The Indian appointed Engineer would join on Rs. 250 instead of the Rs. 350 drawn to start with by the English trained men. The nominal “apprenticeship” of the Rurki man would be abolished as meaningless and generally ignored in practice, and no more necessary in his case than in that of the English trained man, probably less necessary owing to his knowledge of the language and of Indian ways and methods. After probation and training on works for say two years, as described above under paragraph 71,358, both men would be put on the same footing and the same pay. At any rate it is absolutely necessary that after Executive Engineer’s rank is reached there should be no distinction whatever in emoluments. We should then get rid of the anomalies that at present exist and cause heart-burnings and humiliations fatal to efficient service.

71,368. (I.) *Method of Recruitment*.—The only really satisfactory system, apart from a Training College like Coopers Hill is that adopted lately for the “Imperial” P.W.D. service, of careful selection from men who have passed a qualifying examination, and there is no doubt that selection by competitive examination is the worst possible system, and more so especially in India, where the classes that shine most in the schools are those least fitted for hard outdoor work, which needs specially energy and perseverance and practical ability. If any workable system could be devised of nomination from schools and colleges for a qualifying examination, and a farther selection after personal interview by a competent and impartial Board of Examiners, it would be an ideal arrangement; but I am aware that in India there are almost insuperable difficulties in the way of any such arrangement. However, absolutely impartial the selectors might be in fact, there would be bitter complaints of unfairness to certain races, or religions, or castes, leading to constant appeals, and I am afraid some system of competitive examination as at present is unavoidable. It is, however, possible to limit to some extent the entrance into the Service of the more unfit, by insisting on a searching medical examination with particular attention to physical activity and hardiness before applicants are allowed to go for the entrance examinations of the Indian Engineering Colleges, and to give marks in the passing out examinations, for riding and proficiency in gymnastics, and games which tend to activity of mind and body and a sound physique.

71,369. (II.) *Probation and Training* would be as proposed above for the Imperial Service.

71,370. (IV.) *Conditions of Salary*.—It has been explained above that the pay must be the same as for corresponding grades of the present “Imperial Service,” at any rate after the rank of Executive engineers has been attained. I am quite willing to admit that for Natives of India living on the Indian scale the European scale of pay is high, if we compare the respective necessary living expenses, but in this Department at any rate we have to remember that a large proportion of the officers are domiciled Europeans and Anglo-Indians who do, and to preserve their position must live on the European scale, and it is also desirable that educated Indians should be encouraged to adopt European manners and habits of life. A perfectly fair arrangement theoretically would be to have two scales of pay, one for all Indian appointed officers who live on the European scale and a lower one for those who live in native style, and

it would have excellent results in bringing about an approximation to a common scale of the habits of life, which is necessary to allow of free social intercourse and friendship between the Europeans and non-Europeans, without which it will be impossible to quite remove racial feelings and jealousies.

I do not think, however, that under present circumstances any such differentiation is possible, and the only fair solution is to give all officers doing the same work the same rates of pay.

71,371. (V.) *Conditions of Leave and (VI.) Conditions of Pension*.—The appointments made in India are meant for Indians and members of the domiciled community, and it will be no grievance to any of them if they have the same rules as the “Uncovenanted Service” generally, though they should of course have a right to any extra pensions paid to Superintending and Chief Engineers.

71,372. (VII.) *Limitation in the Employment of Non-Europeans*.—For appointments made in India there can be no limitation of non-Europeans, but it is arguable that there should be limitations, perhaps, excluding Europeans not members of the domiciled community, as there would be otherwise a danger of men educated in Europe coming out specially to compete in the entrance examinations, when the service after the improvements proposed is made tempting enough to attract them. (This actually happened in 1871-72). Amongst Indians, and domiciled Europeans and Anglo-Indians, who are fairly eligible for admission to the Indian Engineering Colleges, it is not I am afraid possible to lay down any proportions as to the numbers in which the races and castes are to be admitted respectively. The better educated members of the domiciled community have proved themselves specially suited for such work, and it is also true that Engineering as a profession does not attract or suit the class of Indians who are at present the most highly educated, and most likely to be successful in competitive examinations. It would therefore certainly tend to the efficiency of the service if at least half the appointments were reserved for the domiciled community, and stated proportions also reserved for Mahomedans and the Artificer classes generally, who are the best practical men though at present backward in English education, but it is not possible in practice to make such reservations and all will have to take their chance equally at the competitive examinations.

In closing my remarks on the Provincial Service I beg to be excused for repeating that I have made no mention of the various other strong arguments against it that may be drawn from its history, of broken pledges, and alleged injustice and harsh treatment, &c., &c., but have been constrained by my deep interest in the Public Works Department to give my reasons founded on long personal experience for believing that reforms on the lines I have recommended are urgently called for in the interests of the State, as a mere matter of expediency.

TEMPORARY ENGINEERS.

71,373. The Commission will know all about this service and it is not necessary for me to go into great detail. The Temporary Engineers are men with sufficient professional training, or knowledge obtained from practical experience, to carry out Engineering works. They are engaged as non-pensionable officers subject to dismissal at a month’s notice, but engagements are generally for a year at a time. Towards the end of this year every temporary man is in a state of very uncomfortable suspense as to whether his services will be retained or not. There is no regular system of promotion and temporary men have at present little or no prospect of attaining any rank or pay, above that of Assistant Engineer on Rs. 600 a month. As a rule, so far as is possible under these conditions, temporary men are treated with a certain amount of consideration and have had a tolerably contented existence and a fair prospect of continuous employment so long as their work is satisfactory, but they are entirely at the mercy of superior officers who are sometimes prejudiced and inconsiderate, and many have suffered from very unjustifiable treatment. In a recent case, on one State Railway, thirteen Temporary Engineers were suddenly served with a

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month’s notice for no fault, but because this number of permanent men was supposed to be coming to it, and room had to be made for them. In the end, as might have been foreseen, nearly all of the Temporary Engineers were either retained or re-appointed, but the disturbance of the work of the Railway, while half the staff was on transfer and retransfer was indescribable, and the shock to the men of the sudden dismissal and anxiety about their future, was such as no men who are doing very responsible work, and supposed to have some self-respect, can be subjected to without deplorable results.

The Temporary Engineers’ service is as a matter of fact, if reasonably dealt with, a very valuable and useful part of the Department. The number of officers required from time to time varies so much that to appoint a sufficient number of permanent pensionable men for busy years leads to a surplus in slack times of a very expensive staff for whom suitable employment cannot be provided. The existence of a staff of competent non-pensionable men, whose numbers can be adapted to requirements gives a most useful amount of flexibility in the Establishment arrangements, and coupled with the fact that every temporary man is necessarily a competent man (as his services would not otherwise be retained) has led, especially in the Irrigation and Railway Departments, to the employment of a large number of very useful men, with satisfactory results in efficiency of work and economy in establishment charges. It is obvious that such a valuable body of men should be cherished and encouraged in every way, but there are hardships and disabilities in the service, as briefly referred to above, which need to be put right if there is not to be the deterioration in quality described in my remarks on the Provincial Service. No men with self-respect will stay in it, and we shall get a lower class of men who cannot be trusted.

The points that require attention are:—

(a) The scale of pay.
(b) Eligibility of promotion to higher rank than Assistant Engineer.

(c) Less uncertainty of tenure of appointment.

(d) Better leave rules.

(e) A provident fund.

On these my proposals are as follows:—

(a) *Scale of pay*.—Considering that the service is non-pensionable, the scale of pay should be at least that of the permanent service. The starting pay should be Rs. 250 per mensem for the first year and Rs. 350 after that for young men beginning work. For older and experienced Engineers the pay should be in accordance with qualifications and experience at the time of appointment. There should be a recognized scale for increase of pay of competent men of, say, Rs. 100 every three years till Rs. 600 is reached.

(b) *Eligibility for promotion* to higher rank than Assistant Engineer. This should be allowed in the case of thoroughly efficient men, and there should be possibility of promotion in exceptional cases to the permanent service. Such promotions have been made in the past with excellent results. They were stopped as a grievance to the Provincial Service, but will be so no longer when that Service is put on a better footing. The restriction at present existing to the maximum pay of an Assistant Engineer is fatal to obtaining or retaining the services of the best men.

(c) *Greater security of tenure*.—To preserve the flexibility, which is the *raison d’être* of the Temporary Service there must be a retention of the right to reduce the numbers on due notice, but this can easily be arranged systematically without causing undue anxiety or sudden surprises. The employment at one month’s notice should be retained for the first year’s service which will be on probation, but after that where service is approved the terms should be six months’ notice at least, to allow a man time to look for another job, and it should be understood that reductions will be made from the latest joined men, and that these will have the first claim to re-appointment when numbers are again increased.

(d) *Leave rules* should be in accordance with the uncovenanted service rules generally, for men of the

same pay in the permanent service, including a right to furlough when due.

(e) The Civil Engineers’ or Railway Provident Funds should be open to Temporary Engineers in all cases.

During my service as Engineer-in-Chief in Burma and on the North-Western Railway, I was able to work the Temporary Engineer Establishment much on these lines, with, I believe, great success in getting good work done by a willing and zealous staff, and I see no reason why it should not be done throughout the Public Works Department. There is, I believe, no alternative between improving the Temporary Engineer rules on the lines indicated above, or abolishing altogether a service which must become under its recent treatment a mere refuge for the destitute.

I shall be glad to give any further information that may be called for, or to appear before the Commission when the subject is taken up and answer any questions that may be asked.

Supplementary Written Statement.

71,374.—(1) When drawing up the written statement submitted to the Royal Public Service Commission I had not seen the statement sent in by the Civil Engineers’ Association.*

(2) After reading that very able, and in most respects, moderate representation, I wish to make the following supplementary remarks.

(3) In my memorandum I find that I underrated the increase in the rates of pension that would be justifiable in the case of the Imperial Engineer Service, and agree that something more nearly approaching what is asked for of the Association is called for to put the Public Works Department men on an equal footing with other departments manned by imported officials.

(4) Also I forgot that the leave rules demand a similar improvement.

(5) I consider that the advantages of *technical training in Europe* (as apart from *education*) have been very much exaggerated, and as far as practical work is concerned (excepting Specialist subjects) I believe too much experience under English conditions is a positive disadvantage. The duties of Engineers in England and India are fundamentally different, and so are the circumstances under which the work is carried out. I do not therefore believe in the necessity for Indian appointed men being sent to Europe for practical training. For the work they have to do, training on large works in India is much more suitable.

(6) I do not admit that the technical training at the Indian Colleges is very inferior as has been made out by some people. It is no doubt capable of improvement, but just as good for practical purposes as the European training at Cooper’s Hill or elsewhere.

(7) Also I do not admit that European standards of work are very much superior to those in vogue in good practice in India, which are as good, as a rule, as possible under the circumstances. I have made very interesting inspections of works in Europe but gathered very little, if anything, that has been of practical use in this country.

(8) The question of a “foreign service allowance” being due to imported officers in addition to salaries paid to locally appointed men has been raised. It is undoubtedly a fair and reasonable claim, and can be met adequately by improved leave and pension rules, without any differentiation in actual salaries while on duty.

(9) *A period of probation for imported men* is a very important matter under the new system of selection without the knowledge of character given by three years’ residence in a College. One year however is quite a sufficient period in which to judge of a man’s qualifications for service in India. In practice, whatever the theory, no man would be sent away for anything but faults of temperament and conduct which entirely unfit him for employment in India and these become evident in a very short time.

* Vide paragraphs 72,155-63.

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Mr. F. R. BAGLEY.

[Continued.]

Mr. F. R. BAGLEY called and examined.

71,375. (*Chairman.*) The witness said he was a retired Chief Engineer of the Public Works Department, and now occupied the position of Chief Engineer of Construction with the Southern Punjab Railway. He entered Government Service in the year 1871 from Rurki College. Railway Engineering demanded no higher theoretical training than was needed for work on buildings, roads and irrigation. It required, however, certain qualities of promptness, and readiness of resource.

71,376. His written statement was entirely directed to a general criticism of the present policy in regard to the Provincial Service, and the employment of temporary Engineers. He recommended the abolition of the Provincial Service as it at present existed, and the establishment of a superior Engineering Service. He thought on the whole the supply of suitable material in India would be sufficient to furnish 50 per cent. of the superior Service. He would not suggest such an increase immediately, but he would spread it over three or four years.

71,377. He considered there were positive advantages in recruiting a definite proportion of men who had been educated in England as distinguished from men who had been educated in India. It was a matter of character. Under his scheme openings for the subordinate Service would be the same as at present; the best men of the subordinate Service should be promoted into the superior Service, and ought to get some allowance for the fact that they would under these circumstances enter very much later in life than their colleagues. He would give a man, so promoted, four or five years seniority, which had been the practice in regard to the Royal Engineers, who obtained $2\frac{1}{2}$ years seniority. He admitted that such a practice had been a source of dissatisfaction, but he did not think that dissatisfaction counted for very much. He agreed, however, that this proposal would rather accentuate that feeling of dissatisfaction.

71,378. He was not aware that there was any very great difference in the quality of candidates now available in the Indian Engineering colleges as compared to what it used to be, but he believed from what he had seen and heard in the last few days that the former good class of men were not attracted by the Provincial Service terms, and if there was a difference, that was the reason for it. He thought if better terms were offered, a better class of men would be obtained.

71,379. Technical education, as distinguished on the one hand from general education, and, on the other, from practical experience, counted in his opinion for comparatively little. It was necessary to have a certain amount of technical education as a foundation, but having got that it was entirely a matter of practical experience and of character.

71,380. The training which was at present being given in Rurki included he thought, a sufficient amount of practical experience in surveying, but when he was at Rurki the training, apart from that subject, was practically all theoretical. The year's practical training after passing out of Rurki, was, in his time, an absolute farce. The way to give a man the best practical training was to put him in charge of work. In the old days students from Rurki were at once made Sub-Divisional officers, and that had been the practice up to quite recently. The attention given to such men varied a great deal according to the officer they were under; in other words, the practical training depended almost entirely on the officer.

71,381. He would not alter the present method of recruitment in England. He desired to say that he thought the idea of having another college like Cooper's Hill was quite illusory. Such a college would not produce a better social class; it would produce exactly the same men as at the present time were being produced. He thought three years in a college was a tremendous advantage to a man, but whether it was worth while starting a college for that sole purpose was, he thought, open to doubt. He was acquainted with one or two engineering colleges in Great Britain.

71,382. He would like to reserve a certain proportion of vacancies for the different classes in India, but he was afraid that was quite impracticable.

71,383. With regard to the question as to the proportion of vacancies to be allotted to each of the Indian engineering colleges, the witness thought the best method would be to give a certain number of appointments in proportion to the Public Works Establishments of the particular Provinces.

71,384. It would be in some respects better to have a central college, but he did not think such was called for at the present moment. He thought the technical education given in all the Indian engineering colleges was about on an equality. He did not think there was any necessity for concentrating the course of training for the superior posts in one central college. For present purposes the colleges as they existed now were, he thought, quite satisfactory.

71,385. To a certain extent he favoured the continuance of recruitments from the Royal Engineers, but he thought such recruitment had been rather overdone. If a war suddenly broke out, and the Royal Engineer officers were all called away, it would upset the whole Department. Looked at from the point of view of a reserve, it was very important that Royal Engineers should be selected to the service.

71,386. With reference to temporary engineers, he urged that such officers should enjoy better terms than they enjoyed at the present time. He thought a scheme to restrict temporary engineers to specific constructional work would be very difficult to carry out. There was a tremendous fluctuation in the demand for constructional work. He considered temporary engineers should be eligible for promotion to the higher ranks but he agreed, if they were, there would be a certain legitimate grievance on the part of the Service. That, however, was one of the difficulties which could not be helped; the men would have to grin and bear it. He could see no other way out of the difficulty. He considered that as the Service of temporary engineers was a non-pensionable one, the scale of pay should be rather more than that of the permanent service. He also suggested that all officers of the superior service should get the same scale of pay, certainly after the grade of Executive engineer had been reached, and preferably after the end of two years' probation. He recognised the necessity of regarding the European in India as entitled to a higher scale of pay, but he proposed to mark the difference in the leave and pension rules. All the present discontent arose on account of different pay being given to men who were doing the same work. He would leave the pension rules and leave rules as they were for the Indian Service generally, and would allow the European in India to have preferential treatment in these two respects. He did not think the Service would regard such an arrangement as being quite satisfactory, but there was no serious objection to it. Anyhow the lesser of the two evils was to give a preference in leave and pension rather than to give it in pay.

71,387. Engineers on the Southern Punjab Railway were recruited chiefly in India. When he could do so, he borrowed permanent engineers from the Government. He desired to say that the duties of an engineer in England and the duties of an engineer in India were quite different, and that a man who had had a long experience in England was almost unfitted for duty in India. In England an engineer laid out the work and supervised it, but it was the contractor who was responsible for making the whole of the arrangements; whereas in India there were no such contractors. The Indian contractor was simply a labour agent, and the engineer had to do everything in connection with the work. He thought two or three years' experience of Indian railway construction would benefit a man to a considerably greater extent than any experience on English railways. The suggestion, that the permanent cadre of the State Railways should be fixed in accordance with the normal rather than the minimum requirements, and that in lean years there would be no difficulty in lending out temporary engineers to companies, was an entirely illusory one, as the relief obtained thereby

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[Continued.]

could be only occasional and accidental. The work of the companies fluctuated just as much as the work of the Government. Then again, the Companies' work had to be done, and the Government could not lend a man to a Company and then take him away whenever they wanted. If, however, such a scheme was adopted, it would be necessary to lay down a certain programme for the Companies from which the number of Government men could be calculated. That would simply mean an addition to cadre with its usual difficulties and be no relief at all for temporary blocks.

71,388. (*Sir Murray Hammick.*) If 50 per cent. of the recruitment to the Imperial Service was allowed to Indian colleges, the witness would suggest the discontinuance of the rule under which 10 per cent. of the vacancies filled in England were reserved to Indians. If half the vacancies were filled in India he thought the Anglo-Indian and domiciled European would re-establish himself in the Indian colleges, and obtain as many appointments in the Service as he used to do.

71,389. Why, he said, the so-called practical experience in England was generally a farce, was that a man who went in for such a course could either learn or not, as he chose. If a man went to a railway, or some Engineering Works to obtain the practical training, it was nobody's business to look after him. If a man chose to learn, he could learn a great deal, but if he did not, he need not learn anything. The witness did not agree with the statement which had been made at the last Educational Congress of Engineers held in England some years ago, that the men who came from colleges were absolutely useless without a long course of practical experience in shops. His remarks applied only to Civil Engineering, and had no reference to mechanical engineering. He did not agree that a man in an Engineering Works learned to do the work as the workman did it, and was therefore very superior to the man who came direct from college to the Indian railway. All the circumstances in England were so entirely different—the workmen, the materials and the climate and methods of work.

71,390. (*Mr. Abdur Rahim.*) The reason why he suggested that the 50 per cent. recruitment in India should be worked up to gradually, was because it would take time for men to change their system of education. The men who were not going to Rurki at present and who wanted to become Doctors or Lawyers, would have to change their plans. They would not be all got in at once. In the witness's time, the system was entrance by competitive examination, and appointments were given on the results of competitive examination. He believed at the present time they entered 20 Engineer students in every year by competition. The first six obtained appointments, and the remainder who qualified were given diplomas.

71,391. He thought in India it was impracticable to have anything but a system of competitive examination. He would much rather have a selection of qualified persons, but he was afraid there would be so many complaints with regard to the selection. There would be accusations of favouritism being shewn to one race or religion or another. He thought on the whole the selection in England was the right plan. His experience of men selected there had been satisfactory.

71,392. (*Mr. Madge.*) The rule that incompetent Temporary Engineers would be discharged with a month's notice had been fairly strictly carried out, and therefore the majority of the remaining Temporary Engineers were fairly good men.

71,393. (*Mr. Fisher.*) He did not think there would be room for an intermediate service between the Subordinate Service and the Imperial Service. It has been often proposed and found impracticable.

71,394. (*Mr. Sly.*) There was nothing in the character of Railway Engineering which made it necessary to adopt a different method of recruitment

from that by which Civil Engineers were obtained for other branches of the Public Works Department. He thought if better terms were given, a better class of men would be obtained in India.

71,395. The proposals that officers recruited in England should receive the same pay as the Imperial Staff, but that there should be some difference in the leave and pension rules was in effect a proposal to revert to the position which existed before 1887, and which was described by the last Public Services Commission as being very faulty and causing friction and jealousy; but the witness thought the proposal had been wrongly condemned, and that friction and jealousy only existed to a comparatively slight extent. He admitted, however, that there was very serious friction at the present time, but that was, he considered, on account of the differences in pay.

71,396. (*Mr. Gokhale.*) The witness thought the training at present being given in the Indian colleges was quite sufficient. He was not aware of any very serious defects; he thought the men turned out by such colleges were good enough for all practical purposes. He was of the opinion that his figure of 50 per cent. of Indians to be recruited to the Service could be increased to 70 per cent. at some time in the future many years hence, but he considered there was such a difference in the efficiency of men recruited in England and the men recruited in India as made it necessary that there should always be 30 per cent. of European officers as a minimum.

71,397. He thought that on the whole it would reduce to a minimum the present sense of unfair and unequal treatment if the only differences made were in regard to leave and pension.

71,398. (*Mr. Chabhol.*) It was true that every railway had large workshops attached to it, which would be capable of affording training.

71,399. (*Sir Theodore Morison.*) If the witness's standard of 70 per cent. recruited from the India was worked up to, he would suggest the Imperial scale of pay, so long as any men were brought out from England. He agreed that the present scale of salaries would be such as would be considered very good in England, but he thought under present circumstances men recruited in India must be paid more than it was necessary to pay men in England. He did not say it was a method he would approve of, but it was unavoidable because there could not be two rates of pay. He considered Government would be repaid in efficiency; and that it would get a better class of men all down the list. When the percentage did reach 70, the question of the salary might be reconsidered; he did not think it would be too late then.

71,400. He agreed there had been a considerable change in social habits; Anglo-Indians sent their children to England to a greater extent than they used to, but that was largely on account of there being no openings in India. He was sure Anglo-Indians would send their children to Rurki if the conditions of service were improved. He did not think they would be beaten in the qualifying examination by Indians, nor did he agree with the suggestion that the educational standard of Indians had risen enormously of late years, and that that of the Anglo-Indians and domiciled Europeans had very much deteriorated.

71,401. (*Sir Murray Hammick.*) There were 14 superior engineers on one line of the Southern Punjab Railway, and 12 on another. On the first line there was only one sub-divisional officer an Indian; three of the rest were Englishmen trained and educated in England; and the remainder were Anglo-Indians who had been also educated in England, or partly in England and partly in India. On the second line there were three first class Asiatic Indian officers, the rest being Europeans.

71,402. (*Mr. Aikman.*) He did not think that the relatively large number of Rurki men who had risen to administrative rank was due to Rurki College having been started very much sooner than Cooper's Hill. He thought if the percentage was taken from the same date as the Cooper's Hill men came out, it would be found just as good.

(The witness withdrew.)

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Mr. RAJ NARAYAN.

[Continued.]

RAJ NARAYAN, Esq., Executive Engineer, United Provinces.

Written Statement relating to the Public Works Department.

71,403. (I.) **Methods of Recruitment.**—The superior posts in the Department are recruited in 5 ways:—

- (a) by the appointment of Civil Engineers obtained from England,
- (b) by the appointment of Royal Engineers,
- (c) by the appointment of successful candidates obtained from the Indian Engineering Colleges,
- (d) by the appointment to the permanent establishment of Temporary Engineers, howsoever secured, and
- (e) by the promotion of the Upper Subordinates.

Recruits from England are appointed by a Selection Committee at the India Office without competition. The annual recruitment from this source during recent years has averaged 30. It was 15 (from the Cooper's Hill) in 1887. The annual recruitment in India from the Indian Engineering Colleges is only 9. It was also 9 in 1887. This shows that during the last quarter-century the recruitment in India has remained absolutely unchanged, while the English recruitment has doubled, in spite of the recommendation of the Public Service Commission of 1886-87, to increase the Indian recruitment. The Commission recommended promotion of Upper Subordinates in exceptional cases only, but they are being regularly promoted in the ratio of 5 to 9 of the directly recruited Indian College Engineers, and claim 36 per cent. of the total Indian recruitment.

The number of Engineer officers in these provinces is 123. It was 126 in 1887. The present number consists of 80 English recruits against only 63 in 1887, and of 43 Indian recruits against as many as 63 in 1887. This is the reverse of what was recommended by the Commission. The number of Royal Engineer officers in this period has practically stood stationary.

The annual recruitment in these provinces is about 3 to 4 from England, and only one from Rurki. During this year 5 of the former have been recruited against one of the latter. This is not as it should be. In fact it should be the reverse. If this is not possible at present, there should be at least 50 per cent. recruitment from the Indian Colleges. There are special points of qualification, due to place of recruitment, in both, and a service consisting of more than 50 per cent. of the Indian recruitment, cannot but produce not only safe but better results, and will be acceptable to all, for some time to come.

The present method of selection for recruitment in England is faulty and should be discarded for a system of open and unrestricted competition in which there should be no racial limit whatsoever. The Indian Engineering Colleges which are at present needlessly closed to Europeans non-resident in India—for no European was ever likely to come to study here, only to get less pay, leave and pension—should now be freely thrown open to them, to ensure equal chances to all, and to stimulate further competition, when the Imperial service is again thrown open to students of these colleges.

The subjects of the competitive examination for recruitment in England should at least include all vernacular dialects which should be compulsory for all. The other subjects should be the text books of Indian Civil Engineering, e.g., Irrigation, Architecture, &c., which have been specially compiled in India for Indian standards and practices. The existing system of open competition for admission into the Rurki College, and for admission from the college into the service, is excellent. Those who win the guaranteed appointments after 3 years' hard labour in the college and the 4th year of training on Indian Works, are the pick of Indian intellect, representing all classes of His Majesty's loyal subjects.

Temporary Engineers should not be taken permanently in the same service in which the pick of the Indian and European Colleges are appointed by competition.

Upper Subordinates should not be promoted into this service. They should form a new Provincial service with better status and prospects than they

have at present and there might be "listed" or "prize" posts in the cadre of the Indian Engineer service, which may be offered to the most deserving of them.

The number of Engineers, recruited in India up till now, totals about 200, of which half are Indians and half are Anglo-Indians, residing in India. With the abolition of the present Provincial service, the number of both Europeans and Anglo-Indians will probably increase, as many of them will be able to come to India and learn the profession in the country in which it has to be practised, and those who have now to go to England to qualify for entering the Imperial service will doubtless remain here. There will thus be no danger of the department being swamped with Indians.

71,404. (II.) **Systems of Training and Probation.**—

(A) *Training.*—India, like every other country in the world, has distinctive climatic peculiarities and engineering requirements of its own; e.g., the rainfall here being so precarious, the Irrigation Branch of Engineering has received special attention. The magnitude of our Public works and their success in operation are recognized throughout the world, and the degree of proficiency to which Irrigation Science has been brought in India is not surpassed in any other country. M. Chukoff, a Russian Chief Engineer, is now touring through India to study its canal systems with a view to introduce them in Russian territories. It was from India that several Canal Engineers were sent to Egypt to train rivers and introduce canal irrigation there. It was from India again that only the other day a band of canal Engineers have been sent to the Siam Government to introduce canal systems there. Similar remarks apply to the Architecture, Railways and Waterworks in India. Mr. C. S. R. Palmor, who is a Rurki Engineer, went to Australia where he rose to the Chief Engineer's rank, and was awarded Telford Medal, the blue ribbon, and the Telford Premium for writing papers on Water scheme and Harbour works.

Theory of Engineering in general and its practice in India are two distinct things. The former can be learnt anywhere but the latter must be learnt in India itself. The English recruits, on their arrival in India, are quite new to the country and know nothing about its peoples, languages, ways, and resources. The practice of Indian Engineering still remains to be learnt by them, before they are able to discharge their important duties efficiently and independently. Their practical training begins on the day of their landing, and most of them take several years to overcome these shortcomings. The average period thus required may be roughly put down at about 5 years. Theoretically in service, they are practically in the school of Indian Works for these years, drawing high scholarships in the form of pay.

The case of the Indian recruits is, however, different. They learn the two subjects side by side, both inside and outside of the class rooms, while for 3 years at the college, and again on works in progress, while undergoing the course of one year's practical training, before appointment to the Department. Specially selected books which refer to the science of Indian Engineering are also prescribed in the course of studies in these colleges, in addition to works on general Engineering. The Indian recruit is thus better fitted for his work immediately on appointment. The system of training in India is very satisfactory, and does not require any change for some time to come. But the system of training for Indian Engineering in England is very inadequate and should be wholly directed to ensure the efficient performance of duties required of an Engineer in India.

The competition in England for appointments in India must be real, the appointments offered in any year not being more than one-third of the number of candidates competing in that year.

(B) *Probation.*—The English recruits should be appointed on one year's probation. Any plea that this is unfair or will deter candidates from England, by reason of the risk of rejection, may be met by the provision of free return passages to rejected proba-

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[Continued.]

tioners. The Indian recruits should also be appointed on one year's probation. The present rule of sending two successful students,—one from those who win guaranteed appointments, and one from those who do not—to undergo practical training under two different officers, and to select the former if both prove fit, and the latter, only if the former proves unfit and the latter proves fit, is extremely unjust. Illustration.—The guaranteed number of appointments in 1903, for the Rurki College—*Vide* Calendar for 1912, page 221—was five for the Civil Engineer class. Mr. Wazir Sahai stood 6th, out of a total number of 10 successful candidates of the year. One of the first five proved unfit in the year of training and was rejected. The vacancy thus caused was filled up by the appointment of one who was junior on the list to Mr. Wazir Sahai, simply because the latter did not happen to be posted to the same province to which his junior was fortunate to go. Mr. Wazir Sahai who was senior had equally proved his fitness, but his unjust exclusion was due to the existence of the above rule. His work is, however, so good that he has been kept as a Temporary Engineer for the last 10 years.

The pay during the probationary year for both the English and the Indian recruits should be equal and should equally count towards increments, leave and pension.

If unfavourable reports are received on the first year's work, a second year's trial should be given under a different officer before finally rejecting the probationer, and, in case of an imported Engineer before sending him back at State expense.

71,405. (III.) **Conditions of Service.**—The conditions of service should be the same for officers recruited in India and obtained from England, for the Indian Engineer Service. This will remove the present discontent and increase the efficiency of the Department.

The present practice of rarely posting English recruits under Indian-trained Engineers should be discontinued. The former can learn better under the latter and more rapidly, if he cares to do so. A hollow sense of superiority should not be allowed to take root by this exclusion.

No officer should have his promotions or prospects in service affected by any report or series of reports, which have not been openly, and in more important cases judicially, enquired into. The rules lately published in this connection about His Majesty's Army officers, apply with equal, if not greater force, in the case of the Indian Engineer Service.

Temporary Engineers should be rarely employed, and if ever employed should not be given charge of Divisions, in which qualified Assistant Engineers would otherwise be officiating. Those who have already been employed for many years past should either be taken permanently in the service—on a separate list—or discharged.

The proposals, frequently made, for getting reports on seniors by juniors who may be working under them, or for giving Divisional charges by selection are calculated to be unfair to Indian-trained Engineers and should by no means be entertained, as the actual carrying out of the recommendations of the Commission is likely to gravitate, as in the past, in favour of Imported Engineers.

The table of precedence should be revised, so as to give Engineers a better official status.

The cadre of permanent Engineers should be revised more frequently than in the past.

The Indian Engineers should be distinguished from other services by the reserved and officially recognized use of the letters "I. E. S." This is already allowed in some departments, e.g., I. C. S. for Indian Civil Service, I. M. S. for Indian Medical Service, and followed in Gazette Notifications.

The importance of this service to the prosperity of India should be more fully recognized by conferring more honours on its deserving members, than has been allowed in the past. Some time back, the Indians held ex-officio honours, viz., Khan Bahadur or Rai Bahadur for Executive Engineers and Khan Sahib or Rai Sahib for Assistant Engineers. This should be restored and a more equitable share of honours as compared with members of the Civil Service should be given to Engineers.

71,406. (IV.) **Conditions of Salary.**—There is a difference in pay between the officers recruited in England and in India for doing the same work and bearing the same responsibilities, although both remain on the same list and are promoted side by side in order of seniority. The excess earned by the former, with compound interest at 4 per cent. per annum, under normal conditions amounts to as much as Rs. 1,69,748. Distinction is also made in Local allowances which are meant only for specific purposes, that is, as compensation for local disabilities, which exist equally for both classes of officers. The total excess, thus paid to officers obtained from England, approximately amounts to two hundred thousand rupees. This produces great resentment among the Indian-trained Engineers. To pay them less for no other reason than that they are Indians is against the highest principles of liberal statesmanship, and tends to demoralize them by intensifying the sense of subjection and reducing the sentiment of a common citizenship. The distinction should, therefore, be obliterated. On page 39 of the Historical Memorandum of the Engineer service of the Public Works Department supplied to me by the Chief Engineer, United Provinces, it is stated that "it is agreed that Engineers of the Imperial and Provincial services should be borne on the same list; but it is felt that the principle laid down in Article 85 of the Civil Service Regulations, is fair and equitable. There is no reason why India should pay the same for the native-born Engineers as the Secretary of State has to offer for selected English Engineers in order to induce them to serve in foreign and distant countries." This is a gross perversion of the meaning of Article 85, Civil Service Regulations. The rule is meant to apply to both Europeans and Indians alike and aims at preventing officers, specially Europeans, of the Indian Government from spending more time outside India than is absolutely necessary. Any Government can justly make a similar rule in its own country to save wasteful expenditure by its officers in getting detained abroad longer than necessary. If it is literally applied, an Indian deputed to or detained in Europe on special duty cannot get more than two-thirds of the salary which he would draw, were he on duty in India. This can, therefore, mean that one who serves outside his native land should not get more than two-thirds of what he gets in his native land. If applied to Europeans and Indians serving in India, it can mean that Europeans should get less if they are to serve in India, and Indians serving in India should get more. The Article requires a careful examination in the light of these remarks, before it can be taken as an authority for lesser pay in the case of Indian recruitment. The most important point to remember in this connection is, that the British Empire includes India within its large circle, exactly in the same way, as India includes its provinces within its boundaries, or Delhi its streets within its walls, or a family its children within its building, and no argument which tends to differentiate between wages of the subjects of the same King-Emperor for doing the same work within His Majesty's vast Empire, can be accepted as valid. Correctly speaking there can be no "Imported" or "Exported" officers serving under the same King, if they are His own subjects. If Indians or Englishmen are sent to serve under a foreign Government, Turkey for instance, they can certainly dictate terms, but not otherwise.

The new rule introduced in the reorganisation scheme of 1912, by which an officer cannot draw more than the minimum pay of an Executive Engineer, unless he holds charge of a Division or an equally important charge, will bear very hardly on some officers who may not, for the time being, be under the good grace of any Chief or Superintending Engineer and should be rescinded, except in the case of those officers who have been declared unfit for such charges, on account of faults proved by adequate enquiry. Executive Engineers who cannot be selected for promotion to administrative post for want of vacancy in the latter, should, if otherwise reported on as fully qualified, get special increments counting on as fully qualified, get special increments counting for pension to compensate them for error in recruitment.

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[Continued.]

The officers belonging to the Buildings and Roads Branch and the Irrigation Branch are borne on the same gradation list, but it is very difficult for Irrigation officers to get a transfer to the Buildings and Roads Branch, as none from the latter are found willing to exchange with the former, where, admittedly, the climate is malarious, society wanting and expenses on establishment double. As a compensation for this difference, a special allowance should be given to the Irrigation officers, on the following scale:—

Assistant Engineers ... Rs. 100 per mensem.
Executive Engineers ... Rs. 150 per mensem.

The scale of pay of the Indian Engineer service—consisting of both the European and the Indian recruits on equal pay—should be increased proportionately with other important services in India.

71,407. (V.) Conditions of Leave.—The conditions of leave of the Indian-trained Engineers should be the same as those of the English recruits. The existing distinction is invidious and should be removed. Great stress is laid on the importance of visiting works in foreign countries, and if equal chances, viz., equal pay and equal leave are refused to the Indian-trained Engineers, they are handicapped in competing with their European contemporaries in this respect, which is not fair.

It should be open to every officer to take all the privilege leave, which he has earned, at any time during his service. The existing rule that no privilege leave can be due in excess of three months at a time is unjustifiable, for once earned it is as much due as the officer's pay.

71,408. (VI.) Conditions of Pension.—The conditions of pension of the Indian-trained and European-trained Engineers should be the same for both. Under the existing conditions an Indian-trained Chief Engineer will draw equal pay to, but less pension than, his European-trained confreres. He will further draw less pension than his own subordinates recruited in England. It is submitted that it is a universally established principle, that pensions are retiring provisions for specific services rendered to the State, and it is therefore unjust to create or maintain any distinction between persons who have rendered exactly the same services, nor is it expedient to give any cause of dissatisfaction to retired respectable Engineers, in the interests of promoting goodwill for the Government amongst the Indian people and classes generally.

71,409. (VIIA.) Limitations in the Employment of Non Europeans.—It is believed that the term "Non-Europeans" in this head excludes the domiciled community in India. Unless expressly stated otherwise, the term has so far been used, in this memorandum, to include this community. Although the liberal policy declared emphatically and repeatedly by Government in the past, has been wholly directed to the further employment of Indians in the higher ranks of the service, the actual practice has been anything but satisfactory. The advisers of Government have always considered that the European element must largely preponderate and have arranged matters in such a way that the Indians have not been given a fair trial in the administrative grades. No limitations are allowed in theory, but Indians are excluded in practice. Not a single Indian has yet been tried as a Chief Engineer in these provinces, and an Indian Christian has only recently been given an officiating chance for the first time as a Superintending Engineer. Similar remarks apply to other provinces also. Rai Bahadurs Ganga Ram and Kanhya Lal, although admittedly superior to many European contemporaries were excluded from the highest rank, simply because they were Indians. Times are, however, changing, and evidently under instruction from higher authorities, Indians are now being a little better treated than before. Ten years back there were only a few Indian Executive Engineers in charge of Divisions, but now they are holding such charges more extensively, and very satisfactorily, although not as much as is due to them as their fair share. One-fourth of the total number of Divisions in the Buildings and Roads Branch, and one-third in the Irrigation Branch in these provinces

are now in charge of Indians. The Chief Engineer of Behar and Orissa is an Indian, the Engineer-in-Chief on the E.B.S. Railway is an Indian, and there are some other Indian Superintending Engineers in other provinces of India. If this policy of justice and fair play continues with increased vigour, Indians will certainly justify the trust which is now being reposed in them.

The number of Engineers in India in 1887 was 1,015, of which only 86 were Indians. The total figures for the whole India have not been available to me. The Railway Branches, as a rule, are very conservative in this respect. On the N.W.R. there are only 10 Indians out of 204 officers in the Traffic, Loco., Engineer, and Accounts Branches, and only 5 Indian Engineers out of 73 Engineers. Excluding the Indian Railways, the figures by provinces are as follows:—

No.	Provinces.	Administrative Ranks.		Executive Engineers.		Assistant Engineers.		Total.
		Europeans.	Indians.	Europeans.	Indians.	Europeans.	Indians.	
1	Bengal ...	6	1	10	7	16	7	47
2	Bombay ...	8	1	26	17	39	12	103
3	Madras ...	9	—	36	11	25	12	93
4	Assam ...	2	—	8	1	11	1	23
5	Bihar and Orissa ...	—	—	8	14	9	46	—
6	Burma ...	10	1	39	—	38	—	88
7	Central Provinces ...	5	1	16	7	14	8	51
8	N. W. F. P. ...	2	—	28	—	7	—	37
9	Punjab ...	22	—	59	18	46	19	164
10	United Provinces ...	11	—	37	13	46	16	123
	Total ...	82	4	207	82	256	84	775

Total of Europeans = 605, of Indians = 170.
Indians = 22.5 per cent.

[NOTE:—If Railways are included, this percentage will fall considerably.]

This statement shows that the percentage of Indians is still very low and especially so in the administrative ranks. A greater pressure from higher authorities is evidently necessary to ensure their being tried on these posts. Considering that Indians have already proved successful in the Accounts, e.g., Mr. Wagle, late Accountant-General, United Provinces; in the Postal, e.g., Mr. Badshah, late Postmaster-General, United Provinces; and in the Public Works, e.g., Rai Annanda Prasad, Sarkar Bahadur, B.C.E., Chief Engineer, Bihar and Orissa, it is no longer necessary or just to assume inferiority in other Indians and to condemn them without giving them a fair trial. Indians in other departments have even been given the highest ranks, such as High Court Judges and Members of Executive Councils, and have amply justified their appointment.

71,410. (VIIB.) Working of the Existing System of Division of the Service into Imperial and Provincial.—The Provincial service scheme has entirely failed and it should be abolished with the least possible delay. The alumni of the Indian Colleges should be restored to the superior service, to which they originally belonged, under the name of Indian Engineer Service.

71,411. (VIII.) Relations of Service with the Indian Civil Service and other Services.—There is a tendency among the Revenue officers to bring the Public Works officers under their control. This should be discouraged. The general qualifications of the two are nearly on a par and there will be loss of efficiency if the later are in the least subordinated to the former.

There is a great resentment in the department about putting its officers under the Accountant General in drawing salaries and travelling allowances. Up till last year, the Public Works officers used to disburse them direct by means of cheques drawn on treasuries, but now they have to go to the treasury for receiving payment. They draw cheques for payment to contractors, but they cannot draw cheques for paying themselves. This system does not hold in the Punjab. A case has recently occurred in which

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the Accountant General deducted Rs. 100 from an overseer's salary for an item referring to some very old transaction, of which no details were given to him. The officer had great difficulty in maintaining himself. Delays of months and in some cases even of years and constant worry in getting obvious claims admitted have become a rule, with no useful purpose to the Government. This system should be discontinued. The Accounts Department should continue to do the audit work of the Public Works Department but should not be allowed to bring officers of the Public Works Department under its control in other respects.

An amalgamation scheme of the Public Works and Civil accounts has recently been introduced in these provinces, but not in the Punjab. It is felt

that the previous system was more efficient for audit of Public Works Accounts, as the Public Works Examiner knew the working of this Department fully. The Accountant General cannot get time for this Department, and there is a tendency to ignore the details of accounts, which is extremely undesirable from considerations of economy.

71,412. (IX.) Other Points.—The revenues from this department alone have increased enormously during the last 20 years, but the expenditure on establishment averages 17½ per cent. only, whereas it should not be less than 21½ per cent. The saving of 4 per cent can advantageously be diverted to raising the pay of the Indian College Engineers. The consequent increase in efficiency will far more enhance the revenues and tend to considerable further economy.

Mr. RAJ NARAYAN, called and examined.

71,413. (Chairman.) The witness said he was an Executive Engineer employed on the Ganges Canal in the United Provinces. He had been in the service for ten years, having been recruited from Rurki College. The views put forward in the written statement represented the general opinion of the Provincial officers in the United Provinces. He desired to abolish the distinction between Imperial and Provincial branches, and recruit the superior service with uniform conditions of pay, leave and pension. He suggested that 50 per cent. of the officers should be recruited in England and 50 per cent. in India. If such a proposal was carried out, he thought it would be acceptable to all. By "all" he meant all the Indians and Europeans domiciled in India. The Europeans would not be able to say that they had not a British element in the service, and the Indians would not be able to say they were not adequately represented. He would like to see his proposal take effect in the immediate future, and not to be carried out by gradual means. In addition to the recruitment of 50 per cent. in India to the Service, he would allow Indians to compete in England as well, just as he would allow Europeans to compete in India. He would like to include the vernaculars in the subjects for the competitive examinations in England. He did not think if vernaculars were included it would be giving preferential treatment to Indian candidates in the examination. There would be some English subjects also, which would equalise matters. It was true his scheme might involve more than 50 per cent. of Indians, assuming Indians were successful in England, and 50 per cent. were recruited from colleges in India, but Europeans would come to India as soon as they found they could be admitted there into the Imperial Service. If Government found there was an excess of one class over the other, the further recruitment of that particular class could be stopped at 50 per cent. It was a fact that Indian students learnt theoretical and practical engineering side by side. There were big works going on in the Rurki buildings, and a big canal was running near Rurki, and out of college hours, students took notes of such works. During the vacations it was also insisted upon that they must travel throughout India and see works in progress, and take notes of such works. 200 marks were allotted for notes on works in progress. Practical experience went on throughout the course.

71,414. He was of opinion that Indian trained engineers should get Imperial rates of pay, on the ground that officers doing the same work should be paid the same salary. He did not think any consideration should be given to an officer coming from Europe and serving in this country. He did not think the different conditions which might be supposed to obtain in India were any justification for a higher rate of pay. Indians were not employed in England in the Public Works Department, and Europeans were employed in India, evidently for the purpose of keeping up the British element. It was true he suggested in his written statement that an Irrigation officer should get an allowance of Rs. 100 and Rs. 150. He did so on the ground that such an officer was suffering from less happy conditions than his colleagues in the Buildings and Roads branch. He thought that statement was quite consistent with

what he had just said with regard to Europeans. The two branches were quite distinct, although they had the same list. Promotions in the Irrigation branch to the administrative rank were made from among the Irrigation officers only. The witness's contention was that just as there was a differentiation between the Public Works and the Civil Service and the Medical Service, similarly there could also be a differentiation between the conditions holding in the Irrigation branch, and those holding in the Buildings and Roads branch.

71,415. He would employ in charges, which could not be filled by Assistants in the Imperial Service, upper subordinate officers, to whom he would give the titles of Deputy Engineers. There might be some difference in the work given to those officers as compared with that given to the Assistants. The Assistants might have charge of important sub-divisions, or remain on special construction, and under subordinates could hold ordinary sub-divisions. He would not suggest that the latter officers should rise beyond charge of sub-divisions except on listed posts; there must be superior officers over them, such as Executive Engineers. They could not do exactly the same work as Assistants. If there were any important charges, the Assistants could be sent to take charge of them, and officers of the newly promoted upper subordinate service could hold ordinary charges. Selections for sub-divisional charges would have to be at the discretion of the officer in charge of the Department.

71,416. (Sir Theodore Morison.) Indians recruited direct would have been trained at the various Indian Engineering Colleges, or, it might be, at European Colleges. There would be no objection to the admission of Temporary Engineers in the proposed new service, because it would not be Imperial. He thought the proportion of directly recruited men as compared with the promoted men in this new service should be left to the discretion of the local Governments. Upper subordinate officers with the new status could, he thought, be trusted. Their education was far superior to that of most of the Deputy Collectors. The salary of the upper subordinates recruited in India started at Rs. 100 and rose to Rs. 500. He did not think there was any difficulty in the upper subordinate officers being trained in the same institution as the officers of the Imperial Service.

71,417. (Mr. Gokhale.) The witness thought the ideal arrangement would be to have no Europeans in the Service at all; and that if experts were required on any special occasion their pay should be charged to the work concerned.

71,418. Although Indians were as efficient as English officers, he thought it would be wise to have a certain European element in the Service on account of political considerations. Questioned as to what those political considerations were, the witness said that if a Service in which there had been a predominant European element, was suddenly bereft of that element, it would not look nice to the public, as being rather unfair to Europeans. He agreed there would be no danger to British rule by having the Service composed solely of Indians.

71,419. If the bulk of the appointments did go to Indians, he would still object to the scale of the salaries being lowered for the Imperial officers. The

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public considered the status of a Department and of its officers according to the scale of pay. If the pay in the Engineering Department was Rs. 500, and in other Departments, because there were Europeans in them, it was Rs. 1,500, the former Department would be considered of very low class. He considered the pay should not be reduced.

71,420. (Mr. Sly.) The witness thought that highly educated Indians were attracted more to engineering than to the Provincial Civil Service (even although the latter started at Rs. 250 rising to Rs. 800, and the former from Rs. 100 to Rs. 500), because it was free from evil practices of nomination.

71,421. (Mr. Fisher.) The subjects of examination mentioned in the written statement were compulsory for all the students at Rurki. The mathematics which the witness himself had undertaken at Rurki included the Differential Calculus and the Integral Calculus. He did not think there was anything in the argument that the English trained engineer possessed a better mathematical foundation than the Indian trained engineer. He thought the Indian colleges trained to the same standard as English colleges. He had Indian friends who had had an education in some of the English Universities, and he thought they were well trained, but Indians trained in India were not inferior to them.

71,422. (Mr. Madge.) The witness said he was of opinion that the training at Rurki did not require to be improved at all at present. He was against any scheme for the institution of a single central college for all India, because it would involve a waste of public funds. A great deal of money had already been spent in establishing the four existing colleges.

(The witness withdrew.)

At Delhi, Tuesday, 18th November, 1913.

PRESENT :

THE RT. HON. THE LORD ISLINGTON, G.O.M.G., D.S.O. (Chairman).

THE EARL OF RONALDSHAY, M.P.
SIR MURRAY HAMMICK, K.C.S.I., C.I.E.
SIR THEODORE MORISON, K.C.I.E.
SIR VALENTINE CHIROL.
MAHADEV BHASKAR CHAUBAL, Esq., C.S.I.

ABDUR RAHIM, Esq.
WALTER CULLEY MADGE, Esq., C.I.E.
FRANK GEORGE SLY, Esq., C.S.I.
HERBERT ALBERT LAURENS FISHER, Esq.
JAMES RAMSAY MACDONALD, Esq., M.P.

And the following Assistant Commissioners:—

D. W. AIKMAN, Esq., Superintending Engineer,
Punjab.

J. W. B. LOUGHRAN, Esq., Executive Engineer,
Punjab.

R. R. SCOTT, Esq. (Joint Secretary).

M. NETHERSOLE, Esq., Inspector-General of Irrigation, Public Works Department.

Written Statement relating to the Public Works Department.

71,426. (I.) **Methods of Recruitment.**—(a) *Imperial Service* (1) Speaking generally, the present method of recruitment is satisfactory, but I consider that the Institutions which have the privilege of nominating candidates for appointment by the Selection Committee should be such as ensure a College training as distinct from lecture training and whose degree is recognised by the Institute of Civil Engineers as equivalent to the Institute Examination for entrance to that body. My reason for this proposal is that I consider character and social qualifications as essential for satisfactory service by Europeans in India, and apart from the training in these qualifications which College-life affords, it is only in such Institutions that the Principals have adequate opportunities of making satisfactory selections with reference to these as apart from purely professional qualifications.

(2) I consider that an honours degree, as distinct from a pass degree, at such Institutions, should be an obligatory professional qualification.

If a central college was established in one particular place it would be difficult for men in the other Provinces to come to it. He thought all the Indian colleges were up to the standard of Rurki, but said he had no personal knowledge of the former.

71,423. Temporary Engineers who had been appointed by Government without any educational qualifications, knew nothing of their work, but there were some valuable Temporary Engineers in the service. It depended upon the method of appointment. Speaking of his own Province, the witness thought those Temporary Engineers who had passed out from Rurki College would be quite fit for admittance into the new Provincial Service which he proposed.

71,424. (Sir Murray Hammick.) He did not think it probable that even if the commercial development of India depended largely upon the introduction of foreign capital, the confidence of capitalists would be shaken if any sudden change were made in the control of the Engineering Department. Capitalists had in view the security of the whole of India and not any single Department, and therefore would not mind whether any particular Department was manned by Indians or by Europeans.

71,425. (Sir Valentine Chirol.) His argument in favour of paying the same salary to Europeans and Indians was based on the fact that they were all equally employed in the British Empire. He was not aware that the British Government paid a foreign service allowance to British officers in other services when they were sent on duty outside the British Islands, but so far as he knew no such allowance was paid anywhere within the British Empire.

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happens that a young man on coming to India develops physical or other weakness which to some extent impair his efficiency for service in India: or he finds that he does not like the country. So short a period as two years would not be a serious break in the professional career of a man who might either elect to, or be required to, so terminate his service in India; while it would afford both parties an opportunity of determining whether the engagement might be made permanent with mutual satisfaction.

I would extend the period of probation for Provincial Engineers to two years on works in India and then give each man one year on works at Home with suitable allowances to cover his expenses.

71,428. (III.) **Conditions of service.**—These are generally satisfactory as provided for by the existing Code Rules subject to the remarks I have to make under other heads. I think it is very desirable to make the incremental salary dependent on good work, and not lapse into a mere matter of course. Full opportunity for explanation should be given any officer who is badly reported on by his immediate superior before the increment is withheld.

The rules as to retirement in the case of officers who are shown to be unfitted for further advancement should be strictly enforced, but on the other hand I think, personal allowances should be given to officers whose promotion is stopped by irregularities in past recruitment. I believe this principle has recently been admitted and given effect to in the case of the Indian Civil Service in the Punjab.

71,429. (IV.) **Conditions of salary.**—I consider that the scale of salaries is fair at present both for the Provincial and Imperial branches of the Department.

71,430. (V.) **Conditions of leave.**—I consider either that the limiting maxima of furlough pay should be raised to such amounts as may reasonably be expected to cover an officer's expenses on leave; or that an officer should be given the option of taking half the amount of furlough due to him on full pay with no maxima limits; or that the present restriction of privilege leave accumulation to three months should be extended to six months. My reasons for making these alternative suggestions may best be illustrated by my personal experience. I was obliged to take furlough under very strong medical advice in my eleventh year of service, although I could not afford it. I was married and had a small family. My furlough pay at Home amounted to only £56 a quarter and I returned to India at the end of my furlough £500 in debt. Owing to the financial difficulties in which this first furlough involved me I was unable to take furlough again for another 19 years. During this second period of furlough i.e., in my 30th year of service I was unfortunate enough to incur unexpected expenses owing to the ill-health of my family, which compelled me to curtail the furlough, and once again I returned to India in debt from which I am not yet clear. I have no extravagant habits, and I consider that this actual experience of a European officer serving in India is one which requires very serious consideration as showing that the present facilities for taking necessary long leave are inadequate. It is true that the recent revision of the scales of pay will tend to make it easier, than it was for me, for younger men now in the Service to take long leave; but the limiting maxima from which I suffered still obtain, and I think it entirely in the interest of Government, apart from that of the Service, that the rules should be very carefully revised with a view to making the intention of the Furlough Rules a practical possibility.

71,431. (VI.) **Conditions of Pension.**—These compare unfavourably with the other professional services on a similar footing as to education and social qualifications. The members of the Public Works Department have for many years past been striving to obtain a sympathetic hearing from the Government of India, and the Secretary of State, with a view to being placed on an equal footing in this respect with other sister Services. They have been recently informed by the Government of India, and the Secretary of State, in the House of Parliament, has also stated, that this matter is under reference to

the Public Services Commission. I most sincerely hope that the Commission will give it their sympathetic consideration as I am sure that in view of these official announcements any recommendations from them on this subject will carry great weight.

71,432. (VII.) **Such limitations as may exist in the employment of non-Europeans and the working of the existing division of service into the Provincial and Imperial.**—The remarks I have to make on this point apply equally to all Services as they are based on equitable principles which I consider should be strictly adhered to in regulating the recruitment for all services in India. The scale of pay for all the superior Services in India was fixed originally in consideration of the fact that the Services were at the time manned entirely by Europeans. Thus the scale of pay was fixed not for Indians serving in their own country but for Europeans serving in a foreign country. Consequently, if the scale of salaries as fixed for the superior Services in India be compared with the scale of salaries in any other country in which the Public Services are indigenous, they will be found to be comparatively high. No native of any country will leave his own country to serve in a foreign country on the same rate of pay which would content him and be adequate remuneration if employed in his own country. This is a general principle which has only to be stated to be admitted as essentially logical. The avowed aim of the British Administration in India is gradually to educate and train Indians to take their proper place in the Public Services and the general administration of the country. But I consider that it is not only unnecessary but essentially wrong to admit Indians to the scale of salary which was fixed with reference not to the requirements of an Indian serving in his native country but to those of a European serving in a foreign country. India is not a rich country and cannot afford to pay its indigenous Service at the same rate of pay as it has had to pay its foreign Service. I consider for these reasons that it was an administrative error ever to admit Indians to the rates of pay for service in India which were fixed for Europeans. I believe that if this principle were enunciated authoritatively and observed rigorously it would be accepted as reasonable by all Indians. I believe that the difference of pay in the past has never been objected to except in so far as it has been regarded as an implied slur or mark of inferiority. My opinion as to this has been supported by many conversations which I have had on the subject with Indian gentlemen. For example, when the Public Works Department was divided into the Provincial and Imperial Branches the difference established was not only that of pay but also of the period of service required to qualify for promotion to the higher grades. I believe it was this implied slur or stigma of general inferiority, rather than the difference of pay, which caused the heart-burning and discontent which the matter evoked. This has now been put right so far as the Public Works Service is concerned, and the only difference now obtaining is the difference in pay. This I consider should be the case with all services; namely, one list for all men in the same Service, with Indians on a scale of pay fixed in consideration of the fact that they are serving in their own country, and Europeans on a higher scale of pay fixed in consideration of the fact that they are foreigners serving in a foreign country. It will perhaps be not out of place if I here indicate what appears to me a convenient and simple method of perpetuating this principle and rendering automatic any future revision of salaries such as may occasionally be necessary owing to the rise of prices and general standard of living. It will be remembered that when European salaries were fixed, the value of the rupee was two shillings, but there has been a serious depreciation in the intrinsic value of the salaries owing to the depreciation of silver, and general rise of prices during the last 30 years. The exchange value of the rupee is at present fixed by legislation as to minting at 1s. 4d. If all salaries both for Indian and European Branches of the same Service were the same in rupees and Europeans were paid in gold at the rate of two shillings to the rupee (which, it should be remembered, was the intention

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at the time the scale of their salaries was fixed) the whole matter would be simplified and the European element in the Service would receive their allowance for foreign service in a form which would remove any suggestion of slur on the Indian element in the same Service. As to the numerical proportions to be fixed between the two classes, so far as the Public Works Department is concerned, it may be remarked that the proportion of Indians to Europeans in the Public Works Department was originally nil, as no Indians were qualified Engineers, but it has been steadily increasing. I consider it desirable in the interests of the country that for some time to come the European element in the Public Works Department should preponderate, but I do not suggest that the proportion should be definitely fixed for any long period. The British Government are pledged to increase the proportion of the indigenous element as it develops in all Services. Without questioning the wisdom and right of this policy, with which I entirely concur, I am very strongly of opinion that progress in this direction to be safe and healthy must be gradual.

71,433. (VIII.) Relations of the Service with the Indian Civil Service and other Services.—This is a somewhat delicate subject which I approach with diffidence. If officers of all branches of the Public Service in India would remember always that they are members of a body corporate and act always with a single eye to the public interest and with due regard to the prestige of the general administration, relations as between the different Services would be ideal. I think it may be said that the majority of officers in India have this point of view and that their conduct throughout their service tends to keep official relations cordial and efficient; but it cannot be denied that there are some officers in all Services whose point of view and conduct in their official relations with other Services do not conduce to this end. While recognising that the complete ideal I have indicated is probably unobtainable, it is nevertheless desirable. An important factor in striving to attain such an ideal consists in mutual encouragement and support on the part of all officers in their dealings with other Services in maintaining that sense of public responsibility and *esprit de corps* in all branches of the Public Services alike, which is essential to a high standard of duty and efficiency in the administration as a whole. I think it would tend to raise the status of officers of the Public Works Department and the general esteem in which

they are held by officers in other Services if they were recognised as a Service and not as a department. A member of the Public Works Department may be either a Chief Engineer or a Works Foreman, the letters "P. W. D." do not necessarily indicate a defined and recognised position of public responsibility as do, for example, the letters "I. C. S.," "I. M. S.," or "I. F. S." I think that the superior officers of the department should be recognised as belonging to a service which following the precedent set at the time the Royal Indian Engineering College was established might fitly be designated the Royal Indian Engineering Service. Another matter which I think indicates a lapse from the ideal I have referred to and improvement in which would assist towards the attainment of that ideal is the unequal distribution of honours bestowed in recognition of public service as demonstrated by the Honours Lists. This was recently referred to at some length in the Public Press and it is a matter which in my opinion might be put right by a revision of the procedure under which recommendation for such honours is now made.

71,434. (IX.) Other points.—I consider it very essential that the Public Works Cadre should be more frequently revised to meet the regularly expanding requirements of works. The shortage of permanent cadre in the past has led to a considerable influx of Temporary Engineers whose services, though temporary in name, have in fact been extended for very long periods. This can only lead to discontent and there is no obvious object to be gained by it, if temporary men are fairly paid, they cost no less than permanent men, and in all interests it is desirable that the permanent staff should be kept up to the numerical standard necessary to deal with permanent works and with the administration of an expanding department. There are a certain number of Temporary Engineers brought out on covenant for 5 years whose services are still retained. Many of them have the qualifications required in the case of Permanent Engineers and ripe Indian experience. I consider that both justice and efficiency would be met if such of these men who have been recommended for permanent employ are brought on to the cadre, fresh recruitment being regulated to admit of this. The present cadre is so ragged as to seniority owing to irregular recruitment in the past that this suggestion would also have the effect of evening it up and I very strongly recommend the case of these men to the notice of the Commission.

Mr. M. NETHERSOLE called and examined.

71,435. (Chairman.) The witness said he had occupied the position of Inspector-General of Irrigation since 1912. He was more or less a Consulting Engineer to Government for all Irrigation engineering construction and had very little to do with questions of establishment which were all dealt with by the Secretary.

71,436. The witness considered that the present method of recruitment in England was satisfactory, subject to the qualification that only collegiate institutions should have the privilege of nominating candidates for appointment by a selection committee, and he had in mind colleges where a residential training was possible. He admitted his suggestion might exclude very good colleges, but he was not sure that it would exclude the best. He laid great stress on the value of having men of character and social position in India, as great value was placed on these qualifications by the Indian themselves, a native very often saying that so-and-so was a *pukka sahib* while so-and-so was not. He would hardly carry his suggestion so far as to exclude such non-residential colleges as Glasgow, Manchester, and London.

71,437. The witness said he did not know the present process by which names came before the selection committee, but he believed certain Colleges were asked to nominate men who had the necessary professional qualifications and the men appeared before the selection committee. He considered that an Honours Degree as distinct from a Pass Degree should be an essential qualification. There were some Honours men now in the service. His point of view was that the very best men were required, and some-

thing higher than the average should be aimed at. He considered that candidates should have at least one year's practical training, and he believed Western practice was of great value for Eastern conditions, especially in the knowledge of Engineering plant, such as excavators, steam navvies, pumping plant, &c., of which there was a good deal in England.

71,438. With regard to selection, the witness considered that it was necessary to have on the selection committee a man who knew Indian conditions and for that purpose retired officers of the Indian Service would be available. He would give the recruits a two years' probation in India, and he did not think that would have any deterrent effect upon recruitment, because a man who had a proper sense of his own importance and some self-respect would not be afraid to come, and may good men would be induced to come knowing that they could go back within a short time without any damage to their ties at home if they found the country did not suit them. He thought the only alternative to the present system was open competition after nomination, as in the Navy; but he considered the present system was quite good if properly carried out.

71,439. The witness did not object to the reservation to Indians of 10 per cent. of the vacancies filled by the Secretary of State, as he thought it was wise to encourage Indians to go to England for the purpose of obtaining technical education. They came out to India with broader minds and were likely to make more useful officers. He would not, however, give them the same pay as the Europeans when they returned.

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[Continued.]

71,440. The witness said he had had a good deal of experience in examining Engineering candidates in India and in every case he had found it necessary to mark them up. Having given the marks which he considered the papers deserved he found himself "spinning" probably 80 per cent. of the candidates. In England he had never had to make that liberal allowance. The students did not fail in mathematics and technique, but in the practical application of them. He had nothing to complain about with regard to the syllabus of instruction at Rurki College except that on the whole perhaps it was a little too wide; he did not think that for general engineering such a wide range of subjects was required. In the questions set for the examination he would concentrate more on practical knowledge.

71,441. With regard to the division of the service into Imperial and Provincial Branches, the witness pointed out that in the old days, when Rurki was first started, there was no Indian who desired to become an Engineer, the early recruitment to Rurki being entirely from Europeans and especially from among the sons of Army Officers who had inducements held out to them. Of recent years Rurki had ceased to be a European College in any sense of the word and now consisted almost entirely of Indians. It was quite necessary in the old days to give the Europeans from Rurki the same pay and emoluments as were given to other Engineers in the service. Rurki now did not attract the same class of Europeans. He was of opinion that it was possible to break down the distinction between the two branches and still maintain the differences of pay. So far as the superior grades of the Engineering service were concerned there was no necessity for any distinction whatsoever except in the matter of pay.

71,442. The witness did not think it was suitable to train candidates for the Provincial and Subordinate branches in the same classes at college. He thought it would be impracticable to have only one College, possibly Rurki, as a training College for the Superior Service, and he did not think there was any necessity for it. A Southern Indian would much prefer a College in his own Province. If the standard of all the Colleges was raised he did not see why it should be more expensive than concentrating in a single College. The best means of raising the standard was to improve the teaching staff, and that would only be a small item of expenditure.

71,443. The witness was in favour of sending the Indian recruited officers to works in England for a year in much the same way as the Cooper's Hill men used to be sent to works for practical training after they had left the College. A man who had had a training in India and two years' experience of works in India would be able to go to England and assimilate much useful information in connection with plant and mechanical appliances, which information he could afterwards apply in India. From the social point of view he thought it would do no harm, and by the time the man had had a certain amount of practical training in India he would be in a position to make his own way; he would have had a great deal of intercourse with English people before he went and would know how to get along with them.

71,444. The witness did not think it was possible entirely to stop the employment of temporary Engineers. His great objection to the present system was that it had been carried too far in the past. A more frequent revision of the permanent cadre would tend to reduce the number of temporary Engineers. He was acquainted with one or two men with seventeen or eighteen continuous years' service as temporary Engineers and he believed that was a mistake. He would fill such positions by increasing the permanent cadre and as far as possible reserve the temporary Engineer for specific work. There were of course difficulties in the way, as in a large country like India it was impossible exactly to forecast the programme of works. A famine, for instance, would upset the calculations altogether.

71,445. The witness did not agree that there was work in the Service which was rather more important than that performed by the subordinate Service, but of less importance than that performed by the

trained Assistant; neither did he agree that a class of Deputy Engineers might be created for such work. He thought the temporary Engineer ought to be paid something in excess of the pay of permanent men or given a bonus at the termination of his service. If a man was only engaged for three years he did not think six months' notice would be necessary.

71,446. It was possible that a certain number of ex-Covenanted Civil Engineers might be absorbed into the permanent list; he knew two such officers who were quite qualified for it. They came in under a belief that they were going to be taken on permanently and one of them was definitely promised an appointment. It would be unfair to put them in at the bottom of the list with regard to pay and seniority, but they would naturally come a little below men of similar age on the permanent list.

71,447. With reference to his scheme for paying the Imperial Officer in sterling at an exchange value of 2s. per rupee, the witness explained that the effect of his scheme would be to give the officer from Europe a rate of pay 50 per cent. higher than that of the indigenous officer, and he thought that was about what ought to be paid. It had been more or less already recognised in the code rules as being a fair proportion. There should be no distinction of status as between men employed on the same work, but there should be a definite distinction in the shape of a foreign service allowance to those officers who came from Europe. He thought that would meet with reasonable approval. The only discontent had arisen from the fact that the principle had not been observed. Once the principle was adhered to he thought the whole of India would accept it as reasonable.

71,448. With regard to leave, the witness believed the present grievances might be met by allowing commutation of furlough into full pay subject to some restriction as to the amount to be commuted, and he believed a concession of this kind would be gladly accepted by the Services generally.

71,449. As to pension, the witness considered that retirement after twenty years' service was rather premature. The rule on this point was only introduced to correct an artificial block in promotion, and was intended to be simply a temporary specific.

71,450. (Lord Ronaldshay.) The witness said he wished to see the present rule as to candidates having at least one year's practical training on works in England made compulsory.

71,451. With reference to probation, he did not think there would be any slur on a man who was discharged, if the intention were made quite clear in the original agreement.

71,452. The witness thought it would be a good thing on the whole to retain the opportunities now offered to Indians being recruited in England. If a Native of India wished to go to England to get an Engineering education he would give him the chance of doing so and of getting an appointment. He thought, however, it was a mistake to have a prescribed percentage. The present rule was mandatory, and if the number of qualified men was not sufficient, it was necessary to take in inferior men to make up the 10 per cent.

71,453. On the subject of the training of Indians, he was of opinion that each man should be given one year's training on works in England, he did not think that engineering firms would refuse to take Indians as apprentices if they were paid for doing so. When men left Cooper's Hill they were able to get into engineering works he believed with the payment of a premium by the India Office, and he was under the impression that the Engineers in charge of works were glad to get the men because they were a source of pocket money to them.

71,454. Under the present system a large number of temporary Engineers were required to take charge of sub-divisions. If the number of temporary Engineers was reduced and the permanent cadre increased he was not certain that it would be necessary to make the division much smaller than it was at present and to reduce the proportion of sub-divisions to divisions in order to prevent a block in promotion. He would make the number of Assistant Engineers

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larger than the number of Executive Engineers, and would correct any tendency to block by raising the qualifying limit for advancement to the grade of Executive Engineer. At present the period was ten or eleven years. He would rather have a permanent servant filling a sub-division than a temporary servant as it was more satisfactory to the Government and to the Service. He would allow the Assistant Engineer to rise to higher pay and ask him to serve longer as an Assistant Engineer than he did now.

71,455. (Sir Theodore Morison.) With regard to his proposal to confine recruitment to residential Universities, the witness said he did not want to cut out the modern Universities at all, and if his suggestion tended in that direction he should modify it. He had always understood that both Cambridge and Oxford were asked to nominate two men and Dublin and other Colleges asked to nominate one man, and that from those nominations appointments were made; but it was quite possible he had been misinformed as to the process.

71,456. With reference to the ex-covenanted Engineers, the witness said the Local Governments were asked by the Government of India to nominate men for transfer to the permanent cadre and the Government of India received rather more nominations than they could conveniently deal with and an arbitrary selection was made. The Government cut out some of the senior men because to bring them in it would be necessary to split up a year lower down. There was no ground for saying there was selection on merit. One man was recommended over and over again by the officers under whom he had worked but he was not taken in.

71,457. (Mr. Chaulbal.) The witness agreed as a matter of principle that if possible the burden on Indian Revenues should be lessened by trying to get efficient work done by an indigenous agency, and he said he would like to see this result brought about. He thought the efforts of Government to turn out efficient Engineers from local Engineering Institutions had to a certain extent succeeded and the outcome of these efforts was to be seen in the proportion of Indians now in the service. Progress had been very rapid indeed. The Indians began with nothing and had now reached very nearly 30 per cent. Under the new rules only a certain number of places were reserved for men trained in Indian Colleges, and he considered it desirable in the interests of the country for some time to come that the European element in the Public Works Department should preponderate. He did not suggest that the proportions should be definitely fixed for any long period, and there ought to be a gradual increasing proportion of Indians in the Service.

71,458. That up to the present Indians had not attained to the grade of Superintending Engineers and chief grades of Superintending Engineer and Chief Engineer was due to the fact that in the Punjab there had not yet been sufficient time. There were Indian Superintending Engineers in Bengal and Madras, and he thought the proportion was good considering the number of Indians who had qualified by service for promotion to these posts. It was impossible to say what percentage of Indians employed in the Department rose to be Superintending Engineers and Chief Engineers. A man had to serve about twenty-three years before reaching administrative rank and there were very few Indians of that standing yet. They would rise ultimately.

71,459. With regard to the pay of Assistant Engineers and Executive Engineers, he thought it was extremely liberal comparing it with what an Engineer working in England received. The witness agreed that an Indian had certain expenses which did not fall upon the European, as for instance in connection with marriage ceremonies and family affairs, and the fact that when he entered the Service he was generally a married man. But even taking those things into consideration he still thought the salary paid to a Provincial Engineer was quite liberal; he did not, however, regard the Engineering Service as one which could be in any sense regarded as leading to wealth.

71,460. As to pensions, the witness agreed that the manner in which a retired European lived in England did not much concern the Indian public, but the Indian public would judge the status of an Indian in the Service by the scale on which he lived after retirement.

71,461. The witness thought the expression "pucca sahib" used by Indians generally was synonymous with the word "gentleman," and he was of opinion that residence at an Engineering College was of great value in giving a man that position. He could not say if there was much difference socially between the men who used to go to Cooper's Hill College and the men who now attended such Universities as Glasgow and Manchester.

71,462. The witness said he acted as Examiner at Rurki College from 1901 to 1903 but he was not cognizant of present developments at Rurki.

71,463. (Mr. Sly.) With regard to the suggestion that pay should be fixed according to the market value of the candidate whom it was desired to attract to the Service, the witness said it was impossible to recruit the Public Services on a basis of market values. The market value of an Engineer varied enormously. He thought an Indian ought to be obtained for Service in India on a lower rate of pay than a European and by basing the difference of pay on the value of the rupee he thought any suggestion of a slur on the Indian would be avoided. The witness did not attach great importance to the suggestion that had been made to the Commission that the two classes of Chief Engineer should be amalgamated and that there should be one consolidated rate of pay without allowances for all Chief Engineers. He pointed out, however, that there were not two grades of Commissioners in the Indian Civil Service and when an officer reached that standing in the Service one rate of pay should be fixed.

71,464. With reference to pensions, the witness said the comparison he made between the Public Works Department and other Departments had reference chiefly to the Medical Service and the Royal Engineers, the pensions in the Public Works Department not being so good as in those two Services. He knew of no special reason why the rate as to compulsory retirement at fifty-five should be retained, and he did not think the Department would object to the age limit being raised to fifty-eight if it was adhered to. The rule was introduced as a temporary expedient to remedy a block in promotion and had been kept in force ever since.

71,465. The witness was not in favour of a study leave, believing that the present rules were quite sufficient to enable a man to study while on ordinary leave. The leave rules of the Provincial Engineers were less liberal than those of the Imperial Service, and he would be inclined to extend the period of leave in order that Provincial Engineers might go to England.

71,466. He would not consider study leave as a satisfactory substitute for a year's practical work in England for Provincial Engineers. He would rather give a man an insight into European practice early in his service. After a man had had two years' practical work in India he would be quite capable of assimilating anything likely to be of use to him that he might see in Europe. Afterwards, if he desired to continue his investigations into any special subject, opportunities might be granted to him.

71,467. (Mr. Fisher.) The witness was satisfied with the men who were coming out under the present system and saw no reason to consider them inferior to the men who came out under the old system. It was, however, necessary to qualify that by saying that when it was known in England that the prospects of the Department were very bad there was a considerable falling-off in the class of men entering Cooper's Hill in the latter stages of its existence. He thought that if the revision of salaries had been brought in before Cooper's Hill was closed there would have been no falling-off. He thought present rates of pay were attracting quite as good a class of men as would have been obtained at Cooper's Hill. Under the present system a great number of very good Engineering Colleges were drawn upon, but personally he attached considerable value to a collegiate training.

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71,468. The witness considered that the employment of a great number of Temporary Engineers constituted an evil and led to discontent. From the point of view of the Public Service it did not make for economy, because a discontented man was apt to be careless and there was a loss of efficiency. There was a distinct difference in the level of efficiency as between the temporary Engineer and the permanent Engineer. A number of temporary Engineers were employed simply because no one else could be obtained, though there were some good men amongst them whom he would like to keep. It was quite obvious that if necessity existed for keeping on a temporary man for seventeen or twenty years it was better that he should have definite prospects.

71,469. The witness explained that estimates for new work were prepared by an Executive Engineer, or in the case of an important work, by a special survey and estimating division, and were usually checked by a Superintending Engineer; they were sent to the Chief Engineer, who looked into them with the aid of his personal Assistant. Men were often hauled over the coals for exceeding estimates, but personally he thought it was a good rather than a bad sign because it showed that the estimates were pretty tight in the beginning, and given careful estimating economy of execution was entirely a matter for the man in charge of the work and the officer supervising him. A good Assistant Engineer would make his maintenance grant go twice as far as a careless one. Although it was not so apparent, he believed efficiency in the Department would show much more as economy in maintenance than in construction. If an officer was economical in the carrying out of works this would be taken into consideration in the matter of promotion, and to that extent there was an incentive to economy, though perhaps not quite so much as there should be. If a man was always spending his repairs grant up to the hilt and his division was in a slipshod order he would be reported upon, and the fact that another man was saving 25 per cent. of his repairs grant and had his division in good order would always be mentioned in the reports.

71,470. (Mr. Macdonald.) With regard to his proposals for terminating a man's service at the end of his probationary period, the witness said he did not think that if his proposal were put in force the percentage of rejections would be high. It was very advisable to get rid of unsuitable men early in their career, even if the number so rejected amounted to 5 per cent., and he thought the percentage might well be as high as 5 per cent. having regard to the fact that the retirement would be from two causes, a man not liking India and India not liking a man.

71,471. With regard to the pay of Indian-recruited members of the Service, the witness did not agree that the European staff had set a standard of living which every member of the Service was expected to reach. In the matter of travelling expenses a European would require four bullock carts to carry his belongings about and he had a large number of servants and horses. The Indian would perhaps only have half that number of bullock carts, as his establishment was altogether on a different scale, and he would have a smaller number of servants and horses. Many Indians had taken to living according to European customs but even they could always live cheaper than a European. The witness was not surprised that in the evidence before the Commission so much emphasis was laid upon differences of pay, but he thought if it was once and for all made known to Indian Officers that they were not going to get the same pay as Europeans there would be no discontent on that score. He did not think such discontent would survive a recommendation on the part of the Commission not to put them on equal pay with Europeans.

71,472. The witness said that if the cadre was increased as suggested he would not continue to draw Temporary Engineers from the same sources as they had been drawn from hitherto. At present the Department was often obliged to engage and to keep on a Temporary Engineer who was not quite up to standard, because no other man could be found. A certain number of men were taken each year from Rurki for the Provincial appointments, and from among the unsuccessful students were drawn some of

the temporary Engineers, the other going into private employment or posts under district boards. If the cadre was enlarged the best of the temporary Engineers would naturally be absorbed in it, and subsequently the annual recruitment from Rurki and England would be increased. That would mean that certain men would be obtained from Rurki who now went into district and private Engineering. The larger recruitment from India would necessarily mean a lower average for a little time to come. The witness agreed that in the course of a year or two a man who passed out fifth from Rurki might probably be as good as the man who had passed out first. Supposing it was necessary to recruit five or six more Indians every year he was inclined to think that the average efficiency of the Service would be lowered.

71,473. The witness said that opportunity for private practice was now occasionally given. Should a Municipality want Engineering advice in connection with any municipal business and an Engineer obtained permission from the Head of his Department to do the work he was granted a small honorarium, but that only applied to public work. He did not think there was much scope for private work of that character. He considered the present rules met all requirements. He would not encourage outside work because if it became more common men would be looking after private work to the detriment of their official work.

71,474. (Mr. Madge.) With regard to the opportunities for seeing Engineering work in England and India respectively, he thought that Mr. Bagley had rather overlooked the mechanical side of Engineering which had developed to a very much greater extent in England than in India, and for that branch of Engineering it was easier to get a training in England. It was, however, a fact that an English Engineer coming out to India was of little use until he had learned the ways of the country, the method of obtaining material, and the power of handling workmen. There was no possibility of giving practical training except by employment on works, and he thought the training at Rurki included visits to Engineering works in India. Generally speaking he thought the staff at Rurki was a bit weak for all the subjects that had to be covered, but the appliances at the College were up to date and he had no suggestions to offer for improvement.

71,475. He was glad to hear that hostels were being organised in connection with the Scottish Colleges as it showed that the authorities of the Colleges were of his opinion as to the value of residence. He would not exclude any good Engineering College. His suggestion was that the supervision which was possible in a residential college was of great use and advantage to men in their later career.

71,476. With regard to pay, what he proposed was in effect to give all officers doing the same work the same pay and in addition to pay an exile allowance to Europeans, the allowance being assessed on the basis of a gold standard instead of a silver standard.

71,477. With regard to furlough, the witness considered that furlough depended on considerations of climate. The European was given more furlough than the Indian because, serving in a foreign country, he was supposed to require more change on medical grounds. It was, however, no use giving the European Engineer more leave when he could not afford to take the leave now due to him. The furlough allowance was absolutely inadequate: he himself had never been able to take anything like the furlough he required. The furlough pay should be made adequate to cover the expenses of living in England. He would willingly serve in England on two-thirds of the pay he was drawing in India.

71,478. The witness did not think that the standard of efficiency would be raised by concentrating all the resource and effort in a Central College. A big country like India required to be treated provincially. The establishment of a Central College for the whole of India would not be looked upon with favour by Madras or Burma and he believed Bengal also would object. With reference to the question of preventing blocks in promotion, the witness was of opinion that any increase in the cadre without raising the age limit for the promotion of Assistants would undoubtedly lead to a block, but if the age limit was

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raised the cadre could be increased from below without accentuating the chances of a block.

71,479. (Mr. Arthur Rahim.) The witness did not agree that it was more or less natural that men should feel a grievance because they were being paid less than some of the men with whom they were working. He thought it was a generally accepted fact that imported labour was always paid more than indigenous labour, and he believed Japan paid the men from England more than they paid their own people in connection with the development of their Navy and other matters. It was hardly likely, for instance, that Mr. Bose, the Chemist, would go from Calcutta to Japan on the same pay as satisfied him in Calcutta. It was true, that illustration related to an expert, but so far as India was concerned the Engineering profession must be regarded as a profession of experts.

71,480. The witness agreed that the standard of living had been rising very rapidly amongst Indians and particularly amongst those who had received an education in England.

71,481. He thought the recruitment of 10 per cent. of Indians in England was illogical but he could not admit that it was illogical that the other 90 per cent. should be British subjects of European descent. What he thought was illogical was that the Secretary of State was bound to recruit 10 per cent. of Indians even though there were not sufficient qualified men to make up the number.

71,482. (Sir Valentine Chirol.) Members of the Public Works Department had considerable responsibility in matters of expenditure and supervision of contracts and naturally might be subjected to considerable temptations. Temporary Engineers, not being permanently connected with the Service, might show a tendency to succumb to temptations more than those on the permanent staff, and there had been practical examples of it. With regard to the standard of honesty in the Service, it might be taken as being common in a great measure to both Indians and British members of the Service, but he thought there was a large difference in character which had not yet been eradicated. He did not think India was yet up to the same level of moral character as was shown by the European Service. He would not put the matter only on the ground of honesty, as he thought it was also a matter of temperament or national genius. The European was a practical man; the Indian was more or less metaphysical. A few years ago there was not such a thing as an engineer in India, and he did not think Indians could point to any Engineering Works which had been carried out except under Western guidance. The old Indian Irrigation Works were extremely inefficient.

71,483. (Sir Murray Hammick.) With regard to the possibility of having an open competition in Engineering subjects, the witness said the range was wider in an Engineering examination than in the examination for the Indian Civil Service, but he thought it was quite possible to have a fair examination in Engineering. It was true that some men would be better qualified in Electricity and others better qualified in Hydraulics, but he did not think that would be an objection. At Rurki and Cooper's Hill in the old days the final examination depended to a considerable extent on the marks accumulated during the College course.

(The witness withdrew.)

F. C. Rose, Esq., Superintending Engineer, Punjab.

Written Statement relating to the Public Works Department (being a Report* proposed by a Committee representing the Imperial Engineers of the Public Works Department, Punjab, which was held at Lahore on 31st March and 1st April, 1913).

The opinions and recommendations of the Committee are recorded below:—

71,488. (I.) Method of Recruitment.—Recruits from the Public Works Department should in future

* The Committee consisted of the following members:—Mr. W. E. T. Bennett, C.S.I., Chief Engineer. Colonel R. S. MacLagan, C.B., C.S.I., Chief Engineer. Messrs. D. W. Aikman, C.I.E.; A. E. Orr, F.C. Rose, W. F. Holms, L. F. Robertson, F. W. Carne, A. S. Montgomery, A. J. Wadley, C. J. Floyd, C. B. Williams, F. T. Bates, and H. E. Pellereau, Superintending

71,484. With reference to the suggestion that Public Works Officers got into trouble by having a large balance of money at the end of the year, the witness stated that as a rule a sub-division was a fairly large charge and it was impossible to keep payments right up to date. A man knew that if he did not spend his money within the year it would lapse and that he might have to pay for work already done from the next year's grant. That led either to sub-divisional officers making hasty payments or to Executive Engineers asking why money was spent. He did not know why the Government should object to money lapsing into the common fund except that it rather upset the estimated opening balance. A knowledge of that tendency placed the District Engineers to some extent in the hands of contractors, and subordinates would very often keep back bills, and that all tended to a want of economy. The objections to any practical solution of the difficulty had generally come from the financial side.

71,485. (Mr. Abdur Rahim.) Desiring to ask questions upon the evidence given by the witness in regard to the moral character of Indians, the Chairman ruled that the further evidence of the witness should be taken in camera.

The following evidence was taken in Camera.

71,486. (Mr. Abdur Rahim.) With regard to a question whether Indian Engineers in the Service had a lower standard of honesty than English Engineers, the witness said it was rather a difficult question to answer, but it might be said that speaking generally the old principle of *dasturi* in India was a national and general custom. All salaries under Native administrations were very low and inadequate and a large part of a man's remuneration was obtained by what might be called irregular means. The system of taking a percentage from contractors was extremely common right through the subordinate Service, and as many of the Engineers had come from the same class as the subordinates he considered they had a greater tendency to continue the system of taking percentages on their payments than English Engineers. That was not a hypothetical statement as it was made on the strength of more than thirty years' actual knowledge and experience of Native officers, superior as well as subordinate. He had caught two men in the position of Assistant Engineers and they had been punished. He thought in both cases the men had risen from the subordinate ranks and they were both in sub-divisional charges. He had had no cases amongst those who had been appointed direct to the Provincial Service. He was not speaking of men appointed direct from Rurki. Both the cases he had mentioned were of men officiating in the Provincial Service after having risen from the ranks. He had said nothing about the general reputation of Indians in the Public Works Service but referred only to general character.

71,487. (Mr. Chaulbal.) The witness said that it had never come to his knowledge that a commission had been charged on plant or machinery ordered from England. In fact it was quite impossible so far as the Indian Service was concerned because the ordering was always done by the Director General of Stores in the Secretary of State's office. There was no such thing as an Indian Engineer or a Public Works Engineer ordering direct from England and communicating direct with the manufacturer.

be appointed from England and India. The majority of the Committee considered that the proportion between the two classes should be 70 per cent. from England and 30 per cent. from India, the latter to include recruits from all sources in India. A small minority considered that no proportion should be fixed.

The majority of the Committee agreed that there should be a Central Training College for men to be recruited from England. If this be impossible, the

Engineers, and Mr. R. C. Wilson, Executive Engineer (for Mr. R. C. Laurie, Superintending Engineer. Mr. Bennett and Colonel MacLagan did not vote. The opinions and recommendations recorded in this report are those of the other members of Committee. Mr. Bennett's and Colonel MacLagan's opinion will be found in another report.

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present system of selection should be continued, but there should be men with recent Indian experience on the Selection Board.

Men appointed in India should be taken from Indian Engineering Colleges, but candidates should be nominated for Government appointments by a Selection Board prior to entrance into the College.

The permanent cadre should be revised to actual requirements, and the number of temporary Engineers employed should be reduced to a minimum.

Royal Engineers of more than five years' service should not as a rule be appointed to the Department, and on entering should be placed with due regard to seniority.

Specially selected temporary Engineers and Upper Subordinates may be appointed to the Engineering Provincial Establishment in exceptional cases.

The majority of the Committee was of opinion that, of the men appointed in India, 25 per cent. of the appointments should be reserved for statutory natives of India. A minority was of opinion that there should be no fixed percentage. In cases of exceptional merit men may be transferred from the Provincial to the Imperial Service.

71,489. (II.) System of Training and Probation.—The Committee was of opinion that after appointment, whether in England or in India, the men should be kept on probation in India for a certain period. As to the length of this probationary period opinions varied from one to five years. Some members were of opinion that if a Central Training College could be established in England, no probationary period would be necessary.

71,490. (III.) Conditions of Service.—The Committee was unanimous in considering that the present rules limiting the salary of officers to Rs. 800 in the case of an Imperial and to Rs. 535 in that of a Provincial Engineer, unless in executive charge, should be abolished, and considered that if an officer be reported as fitted for executive charge, he should continue to draw his annual increments. The Committee also considered that executive officers who are recommended as fit for administrative charge, but whose promotion to such rank is blocked by want of vacancies in the cadre, should continue to draw annual increments at the present scale up to a limit of Rs. 1,500 or Rs. 1,000 for the Imperial and Provincial Services, respectively.

The Committee was unanimous in considering that the 55 years' rule should be rigidly enforced, and that in view of the increased cost of living and transport, the travelling allowance rules should be revised and a more liberal scale introduced.

71,491. (IV.) Conditions of Salary.—The Committee was of opinion that, owing to the increased cost of living in India, the present salaries do not attract a sufficiently good class of men, and also recorded its opinion that as the money expended in salaries is small in comparison with the total expenditure on works, the recruitment of the very best class of men obtainable would, notwithstanding a small increase in salaries, result in a substantial saving to the State.

It was also of opinion that there should be only two classes of Superintending Engineers on Rs. 1,750 and Rs. 2,000, respectively, and one of Chief Engineer on Rs. 3,000, as those officers are promoted by rigid selection.

The Committee was also of opinion that the proportion at present fixed between the salaries of the Provincial and Imperial Services is correct.

71,492. (V.) Conditions of Leave.—The Committee was of opinion:—(a) that the restrictions in articles 232 to 236, Civil Service Regulations, on the combination of different kinds of leave should be removed;

(b) That the restrictions under article 308, Civil Service Regulations, on the grant (otherwise than on medical certificate) of furlough earned by an officer should also be removed;

(c) That a leave ledger system is desirable under which all leave earned by an officer in accordance with the general rules would be entered to his credit, and he would be allowed to draw upon such credit at any time Government could conveniently spare his services;

(d) That the restrictions in article 251, Civil Service Regulations, limiting the period of privilege leave to three months should be removed;

(e) That the rule laid down in article 299, Civil Service Regulations limiting the amount of furlough and special leave with allowances to six years should be abolished;

(f) That periods of furlough which are usually on half-pay should be commutable to shorter leave of absence on a proportionately higher leave allowance;

(g) That the first furlough may be taken after six instead of eight years' service;

(h) That article 826, Civil Service Regulations, should be abrogated and an officer about to retire should be permitted to take any privilege leave due to him immediately or at any time prior to the date of his retirement;

(i) That the leave allowances sanctioned for officers of the Indian Civil Service and Military Officers subject to the Civil Leave Rules should be extended to the Public Works Department Engineer; and

(j) That the above recommendations should apply in their entirety to both the Provincial and Imperial Services.

71,493. (VI.) Conditions of Pension.—The Committee was unanimously of opinion that the scale of pensions asked for in the memorials repeatedly submitted during late years by the Imperial Service of the Public Works Department is the minimum which should in equity be granted them, and wished to prominently record its opinion that the enormous increase in the cost of living both in this country and at home since the present scale was fixed renders it incumbent on Government to consider without loss of time the very reasonable requests which have been made.

A copy of the most recent memorial is attached* and the attention of the Royal Commission is earnestly invited thereto, as well as to a letter received from the Government of India, a copy of which accompanies, and which clearly shows that the question of pension will be considered on the report of the Royal Commission.

The Committee also desired to invite attention to the fact that the material wealth and prosperity which India now enjoys has been largely built up by the labours of the Public Works Department Engineer who has so far received no adequate recompense, and who is still compelled to retire on a pension which has, through the increased cost of living, now become a mere subsistence allowance.

71,494. (VII.) Such limitations as may exist in the employment of Non-Europeans and working of the existing system of division of services into Imperial and Provincial.—Under this head the Committee merely wish to add to what has already been recorded in paragraph 71,488 (*Method of Recruitment*). It suggested that of the men appointed in England 10 per cent. should be Indians and of the men appointed in India 75 per cent. should be of the same nationality. This is exhibited in the table below:—

Total appointments 100—

(A.) Appointed in England ... 70

(B.) Appointed in India ... 30

Out of (A) 7 appointments to be reserved for Indians and the balance for non-Indians. Out of (B) 23 appointments to be reserved for Indians and the balance, viz., 7 for statutory Natives of India.

71,495. (VIII.) Relations of the service with Indian Civil Service and other Services.—The Committee was unanimously of opinion that no officer of the Public Works Department should, under any circumstances whatever, be called upon to serve under the orders of any Divisional or District Civil Officer who is not a professional engineer and that no one, not an Engineer by profession, should ever be appointed to the posts of Chief Engineer or Secretary, Public Works Department.

71,496. (IX.) Any other points within the terms of reference to the Royal Commission not covered by the preceding heads.—The Committee was of opinion—

(a) That the Public Works Department should be designated a "Service."

* Appendix XIII. (Memorial of 1912).

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[Continued.]

(b) That study leave should be more freely granted as in the case of the Indian Medical Service.

(c) Permission to accept fees for outside professional work should be given more freely.

(d) That the Government should seriously consider the instituting of a Widow and Orphans Fund, and

(e) That the question of invalid pensions should be reconsidered with a view to improvement.

Minority Note by Messrs. D. W. Aikman, W. F. Holmes, F. Bates, R. E. Purves, and C. J. Floyd.

71,497. (I) While agreeing generally with the corporate opinion of the majority of the Superintending Engineers (see paragraphs 71,488-17,496) which sat in Lahore in conference on 31st March 1913 and following dates, a small minority consisting of the undersigned felt so strongly that a mistake would be made if the present division of the Public Works Department into Imperial and Provincial was maintained, that they desire to record briefly a Note of Dissent with their reasons.

(2) To this minority it seemed that, while recognizing that possibly Government might be able to secure the services of recruits of the same class as now fill the ranks of the Provincial Service at a smaller rate of salary than recruits of the stamp which come from England, the benefits of having the officers of an important professional service treated alike in every respect as to pay, pension and leave were so great that the small direct extra cost to the tax-payer would be more than recouped indirectly by the increased efficiency of the Department.

(3) Among other causes of the present want of efficiency are great and natural discontent among the Provincial Engineers, which sometimes manifests itself in ill-feeling towards their better-paid Imperial brethren, and a complete absence of departmental *esprit de corps* and cordiality among all ranks. It is thought that these and other factors, all tending to inefficiency, will have less force if the department is not divided into two main classes of permanent men as now, and all invidious distinctions be removed with a view to making all its officers equally satisfied with the conditions they serve under and proud of the service to which they belong.

(4) Lest objections be raised to the small direct extra cost of the suggested amalgamation, it may not be out of place to emphasize the fact, well known to every experienced engineer in the world, that a capable man can save his employers his salary and often many times his salary throughout his service. This is equally true of men who are largely engaged on revenue work in addition to their professional duties as are many of the Punjab Irrigation Engineers.

(5) Bearing in mind then the great importance, both financially and politically, of aiming at an extremely high standard of efficiency, it is suggested that a sufficiently long period of probation to test thoroughly the qualities of the recruit, from whatever source he comes, be imposed before he is finally accepted as a permanent engineer. But if during his probation it be clear that the candidate is unsuitable, his services should be immediately and without hesitation dispensed with, alike in his own and Government interest.

(6) Final selection or rejection should be preferably made by a board rather than by an individual.

(7) The Provincial Service, if retained, should be filled only by promoted Upper Subordinates, who being admittedly, socially and educationally inferior could have no possible grievance at being put to a lower scale of pay.

*Written Statement of the Views of the Provincial Service Engineers.

71,498. The Provincial Engineers agree generally with the Written Statement put in by the Imperial Engineers† except in so far as their opinion affects the principle that there should be one service only. The Provincial Engineers are unanimous that there should be only one service with no distinction of pay,

* This statement was signed by Messrs. Baij Nath, M. S. Dhody, and J. W. B. Loughran.

† This is included as paragraphs 71,488-96 *ante*.

leave rules, pension or allowances between the men appointed in England and India. The Provincial Service Scheme has been a failure, as it has created much discontent and has destroyed the *esprit de corps* that should exist in the service and without which true efficiency cannot be assured. The scheme was introduced as an experimental measure for seven years (*vide* resolution No. 2523 G., dated 28th September 1893, paragraph 10, page 5), and should have been abandoned long ago. The principle in the Public Works Department should be that men doing the same work should get the same pay according to length of approved service. The present possible condition that a Provincial, Executive or Administrative Officer may get a smaller salary than men working under him is an impossible one and can only lead to discontent and misconception.

71,499. (I.) **Method of Recruitment.**—Recruitment should be 50 per cent. in England and 50 per cent. in India, and there should be no distinction in either country in nationality, creed or colour. There should be open competition in England, three candidates being nominated to compete for each appointment. In India there should be selection prior to admission to the Indian Engineering Colleges for Government appointments. The same proportion of three candidates for each appointment should be maintained.

71,500. (II.) **System of Training and Probation.**—They agree entirely with the opinion expressed in the Imperial Engineers' statement.

71,501. (III.) **Conditions of Service.**—The Provincial Engineers agree to the principle that increments should be continued, but there should be no distinction in pay.

71,502. (IV.) **Conditions of Salary.**—Agree, except that there should be only one service and one scale of salaries for all.

71,503. (V.)-(VI) **Conditions of Leave and Pension.**—Agree.

71,504. (VII.) **Such Limitations as may Exist in the Employment of Non-Europeans, and the Working of the Existing Division of Services into Imperial and Provincial.**—There should be only one service and no fixed proportion of appointments of different nationalities.

71,505. (VIII.) **Relations of the Service with the Indian Civil Service and Other Services, and (IX.) Other Points.**—Agree.

Note by the Chief Engineers, Buildings and Roads and Irrigation Branches, Public Works Department, Punjab, on the Corporate Report of the Departmental Committee held in Lahore on the 31st March and 1st April 1913†.*

71,506. (I.) **Methods of Recruitment.**—The present sources of recruitment to the Indian Public Works Department are the following:—

(i) selection by the Secretary of State from the open market in England;

(ii) from Engineering Colleges in India;

(iii) from the Royal Engineer Corps;

(iv) from the Upper Subordinate Establishment of the Public Works Department in India;

(v) from the open market in India; and the Chief Engineers accept all the recommendations made under this head by the Committee, subject to their further remarks under head VII.

71,507. (II.) **System of Training and Probation.**—The Chief Engineers agree with the Committee that a period of probation for all recruits to the Department would be desirable and advantageous to the best interests of the service.

71,508. (III.)-(VI.) **Conditions of Service, Salary, Leave, and Pension, (VIII.) Relations of the Service with the Indian Civil Service and other Services,**

* This note was signed by Messrs. W. E. T. Bennett and F. E. Guzther, and Col. R. S. MacLagan.

† The Report is included as paragraphs 71,488-96 *ante*.

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(IX.) **Other Points.**—The Chief Engineers see no reason to differ from the conclusions arrived at by the Committee under each of the above heads, and, if it is decided to maintain the Provincial Service, accept them.

71,509. (VII.) **Such Limitations as may Exist in the Employment of Non-Europeans, and the Working of the Existing System of Division of Services into Imperial and Provincial.**—The Chief Engineers agree with the opinion of the majority that recruitment, as between Europeans and Indians should be fixed by a definite scale, and concur in the proposal that 70 per cent. of the total strength of the Department be recruited from England, and 30 per cent. from India. They also accept the recommendation that of the recruits selected annually in England, not more than 10 per cent. should be Indians.

As regards recruitment in India, the Chief Engineers are unanimously of opinion that 60 per cent. of the annual recruits from this source should be reserved for Indians, and 40 per cent. for statutory natives of India.

Recruitment to the Department would thus amount to—

	From England.	From India.	Total.
Of Europeans ...	63	12	75
Of Indians ...	7	18	25

And this is the proportion which, in the opinion of the Chief Engineers, is essential to the efficiency of the Department and which should be aimed at in recruiting Indians for the service.

With regard to the second reference under this head, the Chief Engineers favour the Minority Report, attached to that of the Committee, and entirely agree with it: they are of opinion that if the existing division of the Public Works Department into Imperial and Provincial Services is maintained, the efficiency of the Department as a whole will be impaired.

Written statement relating to the Public Works Department, being a Memorandum by Mr. F. C. Rose.

71,510. (I.) **Methods of Recruitment.**—There is a strong wish among most of the members of the Imperial Service that a residential College, on the lines of the late Royal Indian Engineering College, Coopers Hill, should be established in England, from which Imperial Engineers for the Public Works and Railway Departments would be recruited. They consider that the training which such a College would afford would foster an *esprit-de-corps* which is not to be anticipated among men recruited in the open market, and that this spirit and the qualities which it engenders are of the utmost value to the individual, to the Department and to Government. Students would then be kept under close observation for a considerable period, and there would be less likelihood of men unsuited to the needs of India being appointed than if recruitment is made in the open market.

Assuming then that recruitment by selection, in accordance with the present method, must necessarily be maintained, they urge that at least 50 per cent. of the members forming the Selection Committee should be senior officers of the Public Works and Railway Departments, either on the active or retired lists, as it is felt that the intimate knowledge of these Departments and their requirements possessed by such officers would be of much value in assisting the Committee in their selection of the right class of man.

71,511. (II.) **Training and Probation.**—*Training.*—It is suggested that it should be made a condition of appointment, that recruits should have had at least one year's practical experience on Engineering Works in the British Isles, in addition to an adequate theoretical training.

Probation.—Opinions differ as to the necessity of a probationary period of service in India. While some members of the Imperial Service consider that an officer should be permanently appointed to the Department from the commencement of his service, others consider that it would tend to make the service

more efficient if a probationary period of three years for both Imperial and Provincial services were insisted on. At the end of the period of probation if an officer were considered unsuitable, it is suggested that his services be dispensed with and if recruited in England his return passage paid. Officers considered suitable would be permanently appointed and would count their service for pay, pension, &c., from the commencement of the probationary period. The usual annual increment would be paid to officers on probation until their suitability or otherwise was determined. The period of probation appears to be the more necessary if the conditions of present recruitment are continued. The Selection Committee have only a short interview in which to judge the candidates' personal character and traits, and it is possible that recruits may be admitted whose temperament is totally unfitted for their work in this country, and it is unfair to Government and the Service that such men should be permanently kept on.

71,512. (III.) **Conditions of Service.**—It is urged that the cadre of the permanent Engineers should be more frequently revised than has been the case in the past. It is advisable that the number of Permanent Engineers should more closely accord with the number of permanent appointments, and that less reliance be placed upon making up deficiencies by the employment of Temporary Engineers. In support of this suggestion attention is invited to the following extract from the Report of the Irrigation Commission of 1901, which, although recorded in connection with the Irrigation Branch, applies equally to all Branches. "Paragraph 306.—We trust, therefore, that the great importance of providing an adequate staff of Engineers for the maintenance and management of the larger irrigation works may be steadily borne in mind whenever the revision of the establishment scale is under consideration, and that it may not be supposed that temporary establishments only are required, which can be discharged or reduced when works are brought to completion. Canal management is as important a part of the duties of the Public Works Department as canal construction, and we may add that success in the design and construction of new works depends to a great extent on the management of those which have been completed."

The conditions under which Royal Engineers are drafted into the Public Works Department have affected adversely the position and prospects of a large number of Civil Engineers. Royal Engineers brought in are usually credited with extra departmental service to such an extent as to give them departmental seniority over Civil Engineers who are senior to them in age, and of many years' standing in the Department. The effect on a Civil Engineer thus superseded is utterly disheartening; if senior, his promotion to administrative rank is retarded, or he may even be prevented from ever reaching administrative rank, and, if junior, it may result in delaying him from being placed in a Divisional charge. Whatever form it may take, the result is to subject him at one time or another to a heavy pecuniary penalty. It is recognised that it is necessary in the interest of Government that employment should be found for Royal Engineers in the Department, but it is strongly urged that in justice the appointments should be made in such a manner as not to impair the prospects of Civil Engineers of the same age already serving in the Departments. It is suggested that Royal Engineers should, like Civil Engineers, join the Department before attaining 25 years of age and that the present system, whereby senior Royal Engineers are appointed to the Department, thus superseding Civil Engineers, who by length of service have acquired a certain right to their position on the list, should be abandoned.

Similarly it is urged that if Government transfer any Temporary Engineers now serving in the Department to the permanent scale it should be done in such a way as to safeguard the prospects of officers already on that scale. Future appointments of Temporary Engineers should only be made on the specific understanding that the holders of the same will not under any circumstances be brought on to the permanent scale.

Article 649 of the Civil Service Regulations which provides for the compulsory retirement of Civil

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Engineers, who on attaining the age of fifty years have not been promoted to the rank of Superintending Engineer, should, it is considered, be more rigidly enforced in the case of officers, who on reaching that age are reported as not qualified for promotion to the rank of Superintending Engineer.

In paragraph 80, Volume 1, of the Public Works Department Code, the principle is laid down, that promotion to the administrative ranks should be by a system of selection as opposed to that of seniority. This principle should be more closely followed than at present.

It is urged that no extension of service should be given to any officer beyond the limit laid down in the Civil Service Regulations, and that it ought to be a recognized principle that Government should observe its own regulations as strictly as its own officers are expected to observe them. Recent extensions of service to certain officers beyond the age of fifty-five did seriously affect the pay, position and general prospects of a number of officers of the Department, besides creating a feeling of distrust between junior and senior officers.

71,513. (IV.) **Conditions of Salary.**—In 1908 the scale of pay of the Public Works Department was reorganized and placed on an incremental basis, but at the same time the exchange compensation formerly given to officers was withdrawn. The nett increase in actual emoluments was not commensurate with the increased cost of living in India, which has been so marked a feature of the last decade, and it is felt that the question of pay requires further consideration, and that the pay of the Department should be such as to secure the recruitment of the very best class of men available. The increase in salaries would thereby result in a substantial saving to the State by more efficient service. There is probably no other service in India where inefficiency is so expensive as in the Public Works Department, and it is strongly urged that by the recruitment of the very best material economy in the design and execution of work is secured. It will be readily admitted that an engineer with powers of organization, initiation and invention will save his employers yearly sums which would many times cover his salary.

The following cases of individual hardship which may arise owing to irregularity of recruitment are brought to notice, and suggestions put forward for their mitigation:—

i. Under the reorganization scheme of 1908 it is ruled that an officer may not draw more pay than Rs. 800 per month unless he is in charge of a division, or in a charge which in the opinion of the Local Government is of equal importance. This is unjust to an officer who, though fully qualified, does not obtain a divisional charge simply because there is no vacancy for him. It is strongly urged that the rule should be amended to the effect that an officer of the Imperial Service reported as fit to hold a divisional charge, should continue to receive the ordinary increments laid down in the scale, irrespective of his being in actual divisional charge.

ii. Under the reorganization scheme, Executive Engineers attain their maximum pay of Rs. 1,250 per mensem after 19 years' service. It is urged that an Executive Engineer, if considered qualified for promotion to Superintending Engineer's rank, should continue to draw further annual increments until such time as he is promoted to administrative rank up to a limit of Rs. 1,400.

It is also considered that there should be only two classes of Superintending Engineers on Rs. 1,750 and on Rs. 2,000, respectively, as these officers are promoted by rigid selection.

The present division of the rank of Chief Engineer into two classes, and the variation of local allowances as Secretary to a Local Government, gives rise to the anomaly that a Chief Engineer may be drawing less emoluments than a Chief Engineer junior to him in service in another province, although the work and responsibilities attached to all such posts are exactly similar. The pay of a first class Chief Engineer is generally equal to that of a Commissioner of a division, and whereas the area, over which the latter exercises control, constitutes only a small portion of a Province, the responsibility of the former extends

over a whole Province. The number of Chief Engineerships throughout the whole of India is small, and with the exception of the post of Secretary to the Government of India in the Public Works Department and that of Inspector-General of Irrigation they are the only highly paid posts to which an officer of the Public Works Department can hope to attain. On the other hand, there are a number of Commissionerships in each Province in addition to many other high offices, both with Local Governments and with the Government of India, which fall to the lot of officers of the Indian Civil Service. Having regard to these facts it is not considered too much to urge, that there should be only one class of Chief Engineer, and that the salary attached to the appointment should be Rs. 3,000 per mensem irrespective of whether a Secretaryship to a Local Government goes with the appointment or not. In this event the local allowance of Rs. 250 or Rs. 150 a month, according to whether a Chief Engineer is a Secretary to a Local Government or Local Administration, might be withdrawn.

For similar reasons as in the foregoing, it is considered that the duties and responsibilities attaching to the post of Secretary to the Government of India in the Public Works Department, which appointment is invariably held by an officer specially selected from among Chief Engineers and usually of much longer service than any other Secretary to the Government of India, warrant the appointment being paid at the same rate as Secretaries in the Home, Finance, and Commerce and Industry Departments, viz., Rs. 4,000 per mensem.

71,514. (V.) **Conditions of Leave.**—*Furlough.*—The amount of furlough, which Imperial Officers of the Public Works Department appointed in England can earn is generally considered sufficient. The rules governing the grant of furlough are practically identical with those which apply to the Indian Civil Service and Military Officers subject to Civil leave rules, except in the most important particular of leave allowances. In the case of officers of the Indian Civil Service and Military Officers under Civil leave rules, furlough allowances are subject, if paid at the Home Treasury, to a minimum limit of £500 per annum, or the salary last drawn, whichever is less, and to a maximum limit of £1,000 per annum, whereas for Civil Engineer Officers of the Public Works Department there is no minimum limit and the maximum has been fixed at £800 per annum. The present furlough allowances permissible to Imperial Civil Engineers are as follows:—

Years of Completed Service.	Maximum Furlough Pay.	Years of Completed Service.	Maximum Furlough Pay.
8	£ 279	17	472½
9	297	18	495
10	316½	19	517½
11	327½	20	540
12	360	21	555
13	382½	22	562½
14	405	3 years as Superintending Engineer, 3rd grade.	675
15	427½	3 years as Superintending Engineer, 2nd grade.	787½
16	450	Thereafter	800

As long ago as 1870, in Despatch No. 43 P.W., dated 28th March, the Government of India said:—“Section 16. With reference to paragraph 4 of your Grace's despatch under reply, we may remark that we have already recommended the equalization of the pay of the Military Branches of the Department, and we are gratified to find this proof that Her Majesty's Government are likely to receive that proposal favourably. On this point we only add that we shall be glad to see some plan adopted by which the furlough allowances of Civil Engineers shall be equalized with those of Military Officers in the Public Works Department and, so far as practicable, the advantages of pension also.” This hope has been reiterated many times by the Government of India and by different Secretaries of State since the date of that despatch.

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It is, however, a hope that remains unrealized up to the present day, since a Royal Engineer in the Public Works Department, with 8 years' service to his credit, is entitled to almost double the furlough allowances of a Civil Engineer Officer doing exactly the same class of work and having the same service in the Department. A Civil Engineer is obliged to complete 18 years' service before he can claim an allowance approaching that which a Royal Engineer is entitled to after 8 years' service.

The present allowances are so inadequate that a large majority of officers cannot avail themselves of the furlough due to them, even though the state of their health urgently demands that they should do so. That such is the case is assuredly not in the best interests of the general administration. The question of leave allowances is raised in the last paragraph of the Memorials recently submitted by officers of these Departments; copies of which are attached to this Memorandum as Appendices 1 and 2.* The reply given to the Memorialists by the Government of India was that—“.....Pensions and leave are subjects of reference to the Public Services Commission, and as no doubt the Commission will inquire into these matters and submit recommendations, the Government of India consider that no useful purpose will be served by considering the prayers of the memorialists at this stage.”†

In these circumstances it is confidently hoped that the Royal Commission will be able to recommend that the leave allowances sanctioned for officers of the Indian Civil Service and Military Officers subject to civil leave rules, may be made applicable to Imperial Civil Engineer Officers of the Public Works. There is no valid reason why they should receive less favourable treatment than the other officers named. It is pointed out that feeling on this question is very strong, and that there is great discontent regarding the inadequacy of leave allowances.

It is urged that where the allowances are drawn in India they should be paid in the equivalent in rupees, at fifteen rupees to the pound sterling.

Grant of Furlough.—Furlough earned by an officer should be granted at any time after the completion of eight years' service, subject to the exigencies of the service, unless the applicant has returned within eighteen months from privilege leave covering a period of three months.

Special Leave.—The existing rules regarding the grant of special leave require no alterations, but the allowances should be the same as in the case of furlough.

Privilege Leave.—Under the present rules an officer can earn privilege leave to the extent of one calendar month for every eleven complete calendar months of duty, and such leave is cumulative up to a period of three months only. In the case of officers who have accumulated the full period it frequently happens that the exigencies of the public service prevent their being granted privilege leave when they desire it, and this leads to the leave lapsing through no fault of their own. It would in a measure mitigate against this loss of leave on full pay which an officer has fairly earned, if the cumulative period were extended from three to six months.

An officer should be allowed to avail himself of all privilege leave due to him immediately prior to retirement, and be permitted to retire from the service at the end of his leave, without having to return to duty as he is now obliged to do. This concession has already been made where privilege leave is combined with other leave, and its extension to privilege leave, alone, besides removing a legitimate grievance among officers of the Department, would lead to much less administrative inconvenience than is now the case.

Study Leave.—Modern Civil Engineering is a highly specialized profession and progress in the methods of construction is very rapid. In view of the vast undertakings of the Government of India in the Public Works Department, it is essential for efficiency and economy, that the Engineering Staff of the Department should keep themselves abreast of

modern engineering practice. Engineers can only accomplish this by visiting and studying works of special interest in progress in different parts of the world. That the importance of this is recognised by other nationalities is instanced by the number of engineers who are commissioned by their respective Governments or private employers, to visit works in India, in order to study Indian methods. The majority of Civil Engineers serving in the Department who wish to visit works in the British Isles and other countries, have to do so as private individuals, and entirely at their own expense unless they are placed on deputation, or are specially permitted to visit certain works while on leave, permission in this case usually being given only when Government require special information regarding a particular aspect of a project. In the latter case certain travelling and other expenses are allowed, but the time spent in the visits counts against the officer's period of leave. It is suggested that officers of the Public Works Department should be encouraged to visit works outside India, and that they should be provided with every facility for doing so. Either new rules should be introduced to admit of these facilities being granted, or there should be a much more liberal interpretation of the existing rules regarding the placing of an officer on deputation. The following instance of study leave obtaining in another professional service is cited:—In the Indian Medical Service study leave is granted in England up to one year out of total service in addition to furlough, for the purpose of allowing an officer to study any particular aspect of his profession which he may desire. During this period he receives furlough pay and lodging allowance amounting from four to eight shillings per day.

71,515. (VI.) **Conditions of Pensions.**—The greatest grievance of Civil Engineer officers of the Public Works Departments and one which is most sorely felt is the totally inadequate retiring pension to which they become entitled under the existing rules. Many efforts have been made, spread over a period of forty years or more, to obtain amelioration in this respect. Both the Government of India and different Secretaries of State have long recognized that all was not well, and new rules and conditions have been introduced to improve matters, but the net result has been that the present pensions are actually less than they were 40 years ago, when the qualifications demanded from men joining the service were not as high as they are now and when the cost of living was considerably less. A short history of the Public Works Department pension rules is attached to this note*. Numerous memorials on this subject have been submitted to the Government of India and H.M. Secretary of State during the last 6 years by officers of the Department. Copies of the most recent are attached.† The first memorials were submitted in 1907, but the petitioners were favoured with no reply up to August 1912 when they were informed by the Government of India in their letter No. 942-E., dated 30th August 1912, that no decision could be arrived at pending the receipt of the report of the Royal Commission on the Public Services in India. It is to the Royal Commission therefore that the Civil Engineer Officers now look for redress of this long standing grievance and it is strongly and respectfully urged that the scale of pensions prayed for in the memorials of 1912-13†, is the least which can in equity be recommended.

Further, that as this grievance was brought prominently to the notice of the Government of India, in the memorials of 1907-08 to which they vouchsafed no reply, and as in the meantime a number of officers affected have been placed on the retired list and many more will probably be called upon to retire before a decision is arrived at, any improvements made in the scale of pensions should have retrospective effect, at least from the year 1908.

Prior to 1884, invalid pensions granted to Civil Engineer Officers of the Public Works Department on the Imperial List were governed by Article 474 of the Civil Service Regulations; this Article also governed the pensions of all officers belonging to the Un-

* These appear in Appendix XIII.

† Government of India's letter P. W. D. 1399-1408 E., dated July 23rd, 1913—not reprinted.

* A copy is given as Annexure V to the evidence of Mr. W. S. Dorman (vide page 146).

† These are printed in Appendix XIII.

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covenanted Services as then termed. In Lord Kimberley's Despatch of 1838* a new scale was introduced for Imperial Engineers and Telegraph Officers, with a view to ameliorating their conditions of service; this scale is covered by Article 641 of the Civil Service Regulations. Under this Article the scale has been increased from $\frac{1}{10}$ ths of average salary for 10 years' completed service, $\frac{1}{11}$ ths for 11 years, and so on, to $\frac{1}{20}$ ths for ten years, $\frac{1}{11}$ ths for 11 years and so on, but at the same time the maxima limits have been reduced from those allowed by Article 474. How this rule brought in with the object of improving conditions in certain Services adversely affects officers at the present time, and how much better off an invalided engineer would have been under Civil Service Regulations, Article 474, is clearly shown from a comparison of the columns in the table below:—

Years of completed service.	Civil Service Regulations, Article 641.		Civil Service Regulations, Article 474.	
	Amount calculated on a percentage basis.	Fixed maximum.	Amount calculated on a percentage basis.	Fixed maximum.
10	20	Rs. 2,813	Rs. 1,000	1,406
11	21	3,150	1,400	1,650
12	22	3,520	1,800	1,920
13	23	3,910	2,200	2,210
14	24	4,320	2,600	2,520
15	25	4,750	3,000	2,850
16	26	5,200	3,000	3,200
17	27	5,670	3,000	3,570
18	28	6,160	3,000	3,960
19	29	6,670	3,000	4,370
20	30	7,200	4,000	4,800

It is a decided anomaly that officers of other services coming under Civil Service Regulations, Article 474, and drawing the same pay as an Engineer, should, if invalided, be entitled to a higher pension after 10, 11, 12, 13, 16, 17, 18 and 19 years' completed service and to a less pension after 14 or 15 years' service. It is urged, therefore, that to remove the anomalies pointed out, and to make Article 641 of real benefit to Civil Engineer Officers now serving in the Department, that the maxima limits should be at least the same as those fixed according to Article 474.

There is a strong wish among the Imperial Engineers that there should be one set of leave and pension rules for all Civil Engineer Officers on the Imperial List, irrespective of the source from which they were recruited. Such differentiations as still exist should, it is considered, be abolished.

Family Pension Fund.—Unlike the Indian Civil Service and the Military Services in India, there is no official Family Pension Fund for the Public Works Department. The emoluments of officers in this Department are not sufficient to admit of their making adequate provision for their families should they die in harness. The knowledge that they are unable to make such provision is a constant source of anxiety to many officers who are entirely dependent on their salary, and whose duties constantly take them into situations, which are prejudicial to health. They also have the additional anxiety of knowing that

their pensions are purely personal and cease with their death. There is a strong desire, therefore, that means may be found whereby an officer may be aided in making suitable provision against the event of his death for the members of his family dependent upon him. Pension has been officially defined as deferred remuneration, which means that a certain portion of the salary which would have been paid to an officer, had there been no pension attached to his appointment, is kept back to provide for a pension on retirement. This view is corroborated by the fact that when an officer is transferred on Foreign Service he is made to contribute towards the cost of his pension at the rate of one-sixth of the pay he would have received had he remained in the service of the Government of India. It may be presumed, therefore, that an officer only receives six-sevenths of the pay he would have received had there been no pension to provide for, and that one-seventh is kept back by Government as the officer's contribution towards his pension fund. If the officer had the option of investing with a private Insurance Company the amount assumed to be retained by Government to provide for an annuity, he could probably so arrange the terms that a portion of his annuity would be assured to his widow or other member of his family dependent upon him, should his death take place within a certain number of years from the date his annuity fell due, with the additional security that his family would be covered against the risk of his death, should it take place during the time he was subscribing to his annuity, in the guarantee of a considerable sum of money. Could some such scheme be worked out by Government on an actuarial basis a large number of officers, not only in the Public Works Department but in other Services similarly unprotected, would be glad to avail themselves of it and to subscribe towards the extra cost.

71,516. (VII.) Such Limitations as may Exist in the Employment of Non-Europeans and Working of the Existing System of Division of Services into Imperial and Provincial.—The question raised under this head is one which the Engineers in the Imperial Service have fully and sympathetically considered. As regards the division of Services into Imperial and Provincial it seems necessary in the interests of Government itself that this should remain. It is an economic fact that imported labour has invariably to be paid more highly than home labour, and Government has the right to expect that native-born officers should serve in India on less pay than has to be given to the imported officers. The Englishman serving in India is not working under the same conditions as the Indian. He cannot live so cheaply and has necessarily to bear periodically the expense of long and expensive journeys home for himself and his family, the necessity of which is more often than not due to living under trying climatic conditions. Education for his family in England cost considerably more than education in India and almost without exception during the course of his service each officer has to bear the expenses of two establishments, one in England and one in India. It is considered, however, that officers in both Services should be borne on the same lists for purposes of seniority and promotion. The case is complicated by the presence of a small body of the domiciled community in the ranks of the Provincial Service. These men undoubtedly labour under some hardships, but no reasonable remedy has been suggested.

As regards the proportion of Imperial and Provincial Engineers it is considered that in the interests of efficiency the proportion of imported Engineers should for the present be not less than 70 per cent. In process of time this proportion could be reduced, as increased general efficiency in the Provincial Service is apparent. It is felt that the present system of recruitment is capable of improvement and that before candidates are allowed to enter Rurki or other training colleges a system of selection should be adopted. It is an undoubted fact that at the present many men recruited from Indian Colleges lack energy, power of organization, initiative, resource, ability to control, fairness in dealing with subordinates and other qualities essential for the efficient discharge of work in the Public Works Department and it is felt that the main object to aim at is to build up a Provincial

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Service which, in general conduct and qualifications, can compare favourably with the Imperial Service. Care in recruiting and in addition the rejection of men found unsuitable after a term of probation will undoubtedly help to this end, which, when gained, would in itself be the best argument for increasing the proportion of Indian Engineers.

It is suggested that Provincial Service officers selected for both the rank of Superintending Engineer and Chief Engineer should receive the same salary as officers of the Imperial Service.

Finally it is strongly urged that in considering any changes in organisation the efficiency of the Department should be kept in view. The prospects offered to men entering the Department should be such as to attract the very best material procurable. Careful selection combined with rejection of men subsequently found unsuitable will best secure the interests of the Government. In a large spending Department, like the Public Works Department, certain qualities of character are essential and if the qualifications and integrity of superior officers are not of the highest, it can only result in inefficiency, causing thereby serious loss of revenue to Government and waste of public money.

71,517. (VIII.) Relations with the Indian Civil and other Services.—It is considered that the relationship as existing between the Public Works Department and other Services in India is at present on the whole satisfactory and should remain unaltered.

Mr. F. C. ROSE, called and examined.

71,519. (Chairman.) The witness said he represented the Imperial Engineers of the Public Works Department in the Punjab. The Superintending Engineers whose names were on the written statement were asked to obtain opinions of Executive Engineers, and they met and discussed the views and endeavoured to draft something which was more or less agreeable to everyone. There were no Executive Engineers represented on the Committee, but the papers sent in by those officers were before the Committee in drafting the statement. They all agreed generally, the main point of divergence of those who signed a minority report being on the question of whether the Imperial and Provincial Services should remain as at present. The witness himself was of opinion that the division into two branches should continue in the interests of Government, and he held that opinion purely on economical grounds. He did not think any objection would be taken to having both services on one list and even to their being called by the same name. His objection was to the Indian recruited officer being paid on the same basis as the European recruited officer. He desired to emphasise the point that imported labour should be paid at a higher rate. As to whether salaries should be the same for all with something in the nature of a foreign allowance for the European officer his view would depend largely on the amount of the allowance. He did not mind by what name it was called so long as the difference existed. The witness pointed out that if he returned to England for duty his pay would at once be reduced to two-thirds according to the Civil Service Regulations. He thought the rule was a fair one and was now more or less established in India. It was difficult to gauge what the difference should be, but the general rule appeared to be that a man should expect two-thirds pay in his own country, and he advocated the maintenance of the two-thirds rule on the main ground that the Government had the right to expect to obtain indigenous labour cheaper than imported labour.

71,520. The witness supported the proposal by which all officers in the administrative grades should receive the same rate of pay, and admitted that in that respect the principle he put forward broke down. It was, however, always necessary to pay a good man. The best Engineers in England were very highly paid, but there was a great difference indeed between the rank and file and the man at the top. A man selected for the administrative grades had to be a very good man. Precautions were taken to promote really efficient officers and for the administrative grades a real selection should be made of the very best officers in the Department. Men selected for Chief Engineers

71,518. (IX.) Any other Points within the Terms of Reference to the Royal Commission not covered by the preceding heads.—*Travelling allowances.*—It is thought that the question of travelling allowances requires consideration. The rates of travelling allowance on tour are the same as they were 25 or 30 years ago although the hire of means of conveyance has certainly increased more than 50 per cent., while the price of horses necessary to most officers for their work has increased by at least 100 per cent. The consequence is that officers, who have much district work, are actually out of pocket, in travelling expenses.

Travelling Allowance on transfer.—The inadequacy of travelling allowance in the case of transfers is glaring. The question is common to other Departments. While admitting that transfers in the interests of the Public Service must inevitably involve some expense to the officers transferred, and the practical impossibility of framing any rules suitable to all cases that will obviate it, it is considered that the actual out-of-pocket expenses, especially in the case of long transfers, are frequently more than an officer should be called upon to incur, and often amount to a distinct hardship. It is believed that the question was under the consideration of the Government of India some six or seven years ago and it is suggested that the question be again considered with a view to the present rules, which contain several anomalies, being made more liberal.

had the same pay whether they were recruited in India or in England, and he was in favour of extending this to Superintending Engineers. The cost of living was much greater for an officer coming out to India from England than for an officer living in the country.

71,521. The witness suggested a system of nomination and competition for Rurki instead of open competition as he thought on the whole it would give a better stamp of man if they were selected first. An efficient Nomination Board could be appointed consisting of men who knew what the requirements were.

71,522. The witness did not think that the cadre could be increased so as to absorb all the temporary Engineers or such of them as were in effect doing permanent work. He would fix the cadre in accordance with ordinary normal requirements, that is to say, at such a strength that it would never be likely to be less than would be fully employed. The cadre was certainly not recruited to that standard at present. In the Punjab there were 63 temporary men and 145 permanent men. Even if all the construction works were closed down he did not suppose it would result in a decrease of four divisions. Taking four men to a division that would mean a decrease of 16 men, a number which he thought would fairly well represent what ought to be the strength of the temporary establishment. Forty or more officers were practically doing permanent work and he should like to see the cadre correspondingly increased. The witness said that in the Punjab Irrigation at present the divisions were too big and should be reduced in size. This would at once tend to prevent a block in promotion. He would increase the number of Executive posts in the divisions in the Punjab Irrigation, and he believed there was a proposal now before Government for doing that. Another method would be to do away with the charge bar at Rs. 800. It was difficult to say where the charge bar should come, but probably the thirteenth year of service would be the right time. The selection from Assistant to Executive rank ought to be stiffer than it was at present as there was not now a sufficient amount of selection for Executive posts. If a man was not fitted for an Executive post he should not be promoted. It was true that his scheme would not be of much value to those who were left behind, but they were left behind by their own fault.

71,523. He thought it would be quite reasonable to have a rigid selection within the grades, provided that the charge bar was raised from Rs. 800 to Rs. 1,000.

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71,524. On the subject of the employment of Royal Engineers, the witness said Royal Engineer officers did not care for the Irrigation Branch, but he believed in the Buildings and Roads Branch instances had occurred of Royal Engineers being placed on the permanent cadre to the detriment of the civilians. At present some Royal Engineers came into the Department with from ten to fourteen years' service, when they were over thirty years of age, and they were placed above men who had been in the Department for some time. The ordinary recruit came out at about twenty-three or twenty-four, while the Royal Engineers obtained their commissions about nineteen. He did not think anybody had a word to say against the efficiency of the Royal Engineers. If the age was reduced to twenty-five it would have no injurious effect on the service and the officers would enter somewhere about the bottom of the list and the grievance would be removed.

71,525. The witness was of opinion that under no circumstances should an officer be retained beyond a certain age, but whether the age for superannuation should be 55, 57 or 58 was not a matter of great importance. The important point was to have a rigid rule and to stick to it. To keep on men after the age of retirement created great discontent in the Department. At present there was a definite rule of Government that a man should retire at 55 and all the officers asked that that rule should be strictly adhered to. Regarding the argument that it might be injurious to the Public Service to lose a valuable officer the witness said there were as good fish in the sea as ever came out of it.

71,526. With reference to Widow and Orphan pensions, witness stated he did not wish to argue the question as it was a very intricate subject and officers were not all agreed upon it.

71,527. As regards the question of general increase to the present scale of pensions witness desired to emphasize the fact that there was genuine discontent at present and all officers attached a great deal of importance to this matter.

71,528. (Mr. Madge.) The witness said that if the best of the temporary Engineers were brought on to the permanent cadre and the number of charges were correspondingly increased it would in a great measure remove the present difficulty. The temporary men were taken on for temporary schemes, and as fewer men were required for maintenance, there was supposed to be a reduction in their number after the work on new construction was completed, but, as a matter of fact, as soon as one scheme was finished another scheme was started and the temporary men were kept on. He thought it was necessary to have a certain proportion of temporary men.

71,529. The witness said he had had men of the domiciled community working under him and could say with perfect honesty that one of the very best

(The witness withdrew.)

RAI BAHADUR GANGA RAM, C.I.E., M.V.O., late of the Public Works Department, Punjab. (Retired.)

Written Statement relating to the Public Works Department.

71,535. (I.) **Methods of Recruitment.**—The present method of recruitment to the Imperial Service of the Public Works Department is in my opinion exceedingly faulty. There is no searching examination to test the candidate's capabilities in such subjects as are likely to be of use in India. Mere qualification of A.M.I.C.E., or a diploma of any engineering college in England, regardless of subjects, entitles a candidate to apply for the appointment, and there being no subsequent examination before or after the selection, there is absolutely no criterion of the candidate's capability or relative merits. In such circumstances, and in the absence of any special institution like the old Cooper's Hill College, the training of the Indian colleges must necessarily turn out superior men for the Indian Public Works Department, to those recruited in England.

Remedy.—(a) For recruitment in England there should be first nomination and then competition. The present selection committee should be converted into a nomination committee, and should be composed

men he had had under him was a domiciled "Native." This remark must, however, not be held to apply to all. Good men were to be found among the domiciled community, but there were some very indifferent men as well.

71,530. (Mr. Macdonald.) The witness thought that the difference between the class of men now recruited in India, and the class recruited formerly might to a slight extent be due to the division of the service into Imperial and Provincial, but he spoke on the subject with all reservation. In his view the difference was owing in great measure to a change of nationality, as the men who were recruited formerly came in many instances from England to Rurki.

71,531. (Mr. Sly.) The witness said the figures he had given of the permanent and temporary staff referred to the whole of the Punjab, Roads, Buildings and Irrigation.

71,532. It was claimed by the Public Works officers that there should be no difference in pay or pension between Civilians and the Royal Engineers. He admitted Royal Engineers had obligations which did not fall on the Civilians, but considered that it must also be admitted that many of them were never called upon to carry out those obligations. Personally he would be prepared to take the same obligations upon himself, if asked to.

71,533. (Mr. Chaubal.) The witness would not admit that if England turned out as many Engineers as at present and there were no openings for them in India the law of supply and demand would come in and the remuneration in England fall. There was no profession in England of any kind which found employment altogether in England; England supplied Engineers to all the world. He did not think that throwing on the market twenty-two men a year would make any difference.

71,534. (Mr. Aikman.) With regard to the statement that the proportion of Indian recruited officers reaching administrative rank up to 1892 was higher than the similar proportion of officers recruited in England, the witness said the average number of years of service before an officer obtained administrative rank was twenty-two or twenty-three. Cooper's Hill was started in 1870, and the course being three years, the first batch of men came out in 1873, so that by 1892 they would have only had nineteen years' service. He could not say how many Cooper's Hill men were recruited up to 1892, but recruitment began at the rate of about 50 a year and by 1892 must have fallen to about 30, so that probably between 300 and 400 Cooper's Hill men were recruited during the period in question. Up to 1892 the men who qualified for administrative rank were men who had been educated at Rurki. The only men recruited from England before 1870 were the Stanley Engineers, a body of 40 men, and they were the only English-trained men that were qualified for promotion to rank of Superintending Engineer.

of one member of the Secretary of State's Council to act as president, and the other two members should be nominated annually by the Secretary of State from amongst retired engineers, shortly before the date of nomination.

(b) There should be at least three nominees for each vacancy, and the result should be decided by open competition without any regard to the candidate's nationality.

(c) Candidates must be graduates in B.Sc. in engineering or A.M.I.C.E.'s, or passed engineers from any of the Indian Engineering Colleges.

(d) The subjects of competition should include a thorough knowledge of the great works constructed in India, in roads, buildings, canals, railways, water-works, and drainage works.

(e) Practical training in England should be confined to sanitary engineering only.

(f) Hindustani should be one of the subjects.

Fifty per cent. of vacancies should be given to recruitments in England, and 50 per cent. to recruitments in India.

71,536. (III.) **Conditions of Service.**—All recruitments for permanent vacancies, whether made in

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England or in India, should be classed as Imperial. The distinction of Imperial and Provincial should be abolished, and the conditions of recruitment and service should be the same for Europeans and Indians, except in regard to pay and leave, which I have explained later on.

71,537. (IV.) **Conditions of Salary.**—The salary of permanent men doing similar work should be the same for Europeans as for Indians, but it is only fair that a European, as versus Indians and domiciled Europeans, should get an extra allowance because of the fact of his having to educate his children in Europe, and the expenses he has to incur in his family moving between Europe and India. This allowance should be given to non-domiciled Europeans, irrespective of the place of recruitment, under some such rules as used to be in vogue during the days of exchange compensation allowance. This allowance which I now recommend may be called "foreign service allowance," and should be equal to 15 per cent. of salary.

71,538. (V.) **Conditions of Leave.**—The present conditions of leave are quite good, but they require one modification, namely, that the conditions of leave should vary as to whether leave is spent in Europe or India, and not with any reference to nationality or place of recruitment. To make my meaning clear, if an Indian wishes to spend his furlough in Europe he should get the favourable leave rules, but if he spends it in India, the present rules ought to be sufficient for him.

71,539. (VII.) (a) **Limitations in the employment of Non-Europeans.**—There should be absolutely no

RAI BAHADUR GANGA RAM called and examined.

71,540. (Chairman.) The witness said he retired from the Service as an Executive Engineer, first grade, permanent, in 1903, after serving 30 years in the Public Works Department in the Punjab. He was trained at Rurki and entered the Service in October 1873. When he passed out of the College twelve Europeans and six Indians passed out at the same time. There was only a two years' course then and he did not remember the number of students in the College.

71,541. The witness was in favour of the abolition of the Provincial Service as it now existed and the creation of an Imperial Service half recruited in England and half in India, and he thought that a sufficient number of Indians were now qualified to fill half the total number of vacancies. He favoured limited competition amongst nominated candidates in England and an examination which would require experience of Indian subjects. He did not think that would give preference to Indians, because English Colleges would put the subjects in the curriculum if they knew that a certain number of their students were going in for the competition. It did not follow that by this scheme fifty per cent. of Indians would enter the Service, because the Indian recruitment of fifty per cent. would also include Europeans and Anglo-Indians.

71,542. With reference to the employment of Royal Engineers, the witness was of opinion that such officers did not care to enter the Public Works Department, but he had not considered the question sufficiently to offer any definite opinion.

71,543. With regard to training, the witness considered there would be an advantage in allowing officers recruited in India to have a period of probation in England. He would not make it compulsory on all students because all of them could not afford to go. If, however, they were sent on full pay they should all be asked to go. He thought the best time to send them would be after four or five years' service. He himself went to England after ten years' service and found it very useful. In England he specially qualified himself in Sanitary Engineering, Water Works and Drainage Works and on his return designed and constructed many such works.

71,544. With reference to his proposal for the creation of a new grade of Temporary Engineer, the witness said he would prefer to call them Extra Assistant Engineers. The Civil Service had Extra

limitation; open competition must be the rule, and no race distinction.

(b) **Working of the existing system of division of services in the Public Works Department into Imperial and Provincial.**—The existing system has led to nothing but discontent and hostility, and the word Provincial has become a sort of slur to one who happens to belong to this service. I quite recognise the necessity of having another service with lesser responsibilities and consequently inferior pay. This necessity is now met partly by Provincial service and partly by the recruitment of temporary men, whose lot is extremely deplorable, as they can be discharged at a month's notice, at any time, and whose method of recruitment is extremely unsatisfactory. To meet this want, as well as to meet another want which is very serious, namely, the engineers required for municipal and local boards, I propose the creation of another service, to be called Extra Engineering Service, whose salary should be graded, and should be 66 per cent. of the Imperial men. This service should carry no pension, but a provident fund system. This service should be recruited in England as well as in India, half and half, from those who fail to get into the Imperial. Out of the Imperial vacancies one or two vacancies may, every year, be given to men of extraordinary merit of the Extra Engineering Service, as a sort of encouragement. Thus the existing Provincial and Temporary services be abolished altogether. If any men are still required for temporary jobs, they should be called clerks of works, and should be charged direct to works.

Assistant Commissioners who practically did the same work with a little less responsibility, and economy to Government resulted. He would therefore create an Extra Assistant Engineer Service which would include all the temporary men of the Department and also the men now employed by District Boards and Municipalities. The Temporary Engineers transferred to the Extra class would be more or less permanent on the Provident Fund system, carrying no pension, and would have a much better standing. He would recruit them from among the unsuccessful candidates of Rurki and English Institutions, taking 50 per cent. from India and 50 per cent. from England, men who were qualified for but unable to get appointments in the superior service. He would have promotion from the upper subordinates but they would be promoted to the extra service and not to the permanent service. He did not consider the upper subordinates were qualified to enter the superior service, and he did not think their tone was as good as that of officers in the superior service.

71,545. The witness said there was work in the Department which in his opinion was somewhat more responsible than that discharged by officers in the upper subordinate service but somewhat less responsible than that of the Assistants who were doing regular work. He instanced the work of Engineers of District Boards and in the employment of smaller Municipalities. Larger municipalities would require highly trained Engineers, but 80 per cent. of the Municipalities would only require ordinary men whose work would lie mainly in the construction of small buildings, such as schools, and the maintenance of roads. He desired to bring such men under one category, as at present recruitment was not based on any fixed principle. If a man was engaged by a small Municipality at Rs. 200 a month he had no prospects at all, but when he came on the extra list he might be moved from one place to another and would have a wider field for promotion. At present if a man was in a difficulty with a Municipality he was dismissed straight away and had no chance of being sent to another Municipality. He thought the pay of such a Branch should be from half to two-thirds of the Imperial pay, starting at Rs. 200 and rising to Rs. 600 or perhaps in rare cases to Rs. 800. He did not think his proposal would cause any discontent; there had been none in connection with the Extra Assistant Commissioners in the Civil Service.

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71,546. With regard to salary, the witness said there was justice in recognising that an officer from Europe should receive something more than an officer recruited in India. For the last four or five years he had spent every summer in England and had had many conversations with Englishmen, and when asked by them the reason of the gulf between Indians and Europeans, he had replied that the Indians generally felt they did not get men of high class who were sympathetic with the Indian people; and he was told that to get better men from England the pay must be high. It was for that reason that he advocated extra pay. He had calculated that there were forty appointments every year and he believed that if twenty of the appointments went to India and twenty to England there would be no objection to giving the Europeans extra pay and thus ensuring the employment of men of very high class. He was not prepared to say whether such a scheme of pay would be received with general acceptance by Members in the service.

71,547. (Lord Ronaldshay.) The witness was of opinion that an Indian would be in a better position to benefit from study in Europe after he had had some years of practical service in his own country than by going to England as a student.

71,548. With regard to leave, his suggestion was that the conditions of leave should be governed not by the nationality of a man but by the country in which the leave was taken. An officer would have to elect at the outset where he was going to take his leave.

71,549. (Sir Theodore Morison.) The witness said his proposal was to provincialise the Provincial District Engineers and all the temporary Engineers now employed by the Department. There was a considerable quantity of work which was midway between superior work and subordinate work, as for instance sub-divisions in which very little Engineering was required. For example, when a canal was being worked there were revenue sub-divisions whose chief duty it was to distribute water to the zemindars and collect water rate, and those things could be well done by temporary engineers. He thought the maintenance of railways might be classed in the same manner though his experience of railways was not very great.

71,550. With regard to foreign service allowance, the witness considered that 15 per cent. would be in a way sufficient to tempt a man to leave his own country, as it would just meet the extra expense incurred by the moving of a family.

71,551. (Mr. Chaulbal.) The witness said that after thirty years' service his permanent salary was Rs. 1,100 but he received in addition an allowance of Rs. 150, whilst employed on the Delhi Durbar of 1903. When the last Public Service Commission's recommendations were put forward Indian Engineers previously in the Service were not affected by the changes that were introduced; they remained on under the old rules. He had never risen to Superintending Engineer's grade and no Indians had risen to that grade in the Punjab. He was never superseded.

71,552. With reference to his scheme for Extra Assistant Engineers, the witness said that the Engineers of Municipalities and District Boards were now paid out of Municipal funds, but under his scheme the pay would be debited to the Municipality by the Government, who would make the appointments. He saw no difficulty in having in a Government Department a number of officers working under different Municipalities and District Boards. If a

(The witness withdrew.)

LALA WAZIR CHAND CHOPRA, Executive Engineer, Punjab.

Written Statement* relating to the Public Works Department.

71,560. (I.) Methods of Recruitment.—This head naturally sub-divides itself in two sub-heads, namely: (i) Sources of Recruitment, and (ii) System of Recruitment.

* See also the "Views of the Provincial Service Engineers" appended to the Report of the Imperial Engineers—paragraphs 71498-505.

Municipality was only able to pay an Engineer Rs. 100 it could have a subordinate; if it could afford to pay Rs. 200 it could take the lowest class Engineer; more than half the Municipalities and District Boards in the Punjab were employing Engineers drawing more than Rs. 200.

71,553. The witness did not agree with the statement that Indian Engineers were generally lacking in energy, power of organisation, initiative, resource, ability to control, and fairness in dealing with subordinates. He was not in favour of a separate scale of salaries for a Provincial Service as he wanted to have only one Service. He should continue the present Imperial pay subject to increases he had recommended and the Foreign Service allowance for pure Englishmen should be 15 per cent. above that. His idea was to amalgamate the present Provincial Service with the Imperial and to have an Extra Service, the highest pay in the new Service being Rs. 800.

71,554. (Mr. Fisher.) The witness considered that the Public Works Department obtained the pick of the Indian trained Engineers, the second best going to the temporary establishment of the Public Works Department, and the third best going to Municipalities. He considered Municipal Engineers would be glad to be taken into the Public Works Department. He did not propose they should be pensionable but that they should have a Provident Fund.

71,555. (Mr. Macdonald.) With reference to his proposal that students in England should be examined on Indian subjects, the witness said the knowledge would only be that acquired from text-books and would be on a par with that which was obtained in Cooper's Hill. Hindustani would be valuable all over India from Madras to the Khyber. Should a man ultimately not succeed in entering the Indian Service he did not think it would have done him any harm to have studied Hindustani.

71,556. (Mr. Mudge.) The witness was of opinion that Sanitary Engineering was the only subject that could be studied better in England than in India.

71,557. (Mr. Abdur Rahim.) The witness said his experience led him to believe that if a large number of Indians were introduced in the Public Works Department the Service would not suffer in efficiency. They had already been employed on Buildings, Roads, Irrigation, and other work, and had shown no lack of ability in doing it. They had also been employed in the Punjab up to the grade of Executive Engineers on the construction of canals. The reason why the witness did not serve his full time in the Service was because he received a grant of land after finishing work in connection with the Coronation, and as he could not obtain the grant until he retired he preferred to retire rather than to wait.

71,558. (Mr. Aikman.) The witness said he thought the class of Engineer at present employed by Municipalities like Lahore, Amritsar and Delhi, would accept the pay and status of the Extra Assistant Engineer class he proposed. At present higher salaries were paid because there was no source of recruitment except from outside. The witness recommended the present Imperial scale for Indians and an extra 15 per cent. above that scale for pure Englishmen, provided the percentage of Englishmen was not more than 25.

71,559. (Mr. Laughran.) The witness said he had not stated that the work of a sub-division in the Irrigation Department was inferior but that the Revenue Sub-Division did not require much Engineering skill.

(The witness withdrew.)

LALA WAZIR CHAND CHOPRA, Executive Engineer, Punjab.

(i) Sources of Recruitment.—The two principal sources of recruitment at present are:—

(a) Appointments in England by the Secretary of State, under the advice of a Selection Committee;

(b) Appointments given to more successful students of Indian Engineering Colleges.

When the last Public Service Commission sat, annual recruitment on the average was 21 men from source (a) and 9 men from source (b), i.e., 70 to 80 per

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[Continued.]

cent. The Commission then was of opinion that the proportion of recruiting from Indian colleges was inadequate and that this proportion should be gradually raised. On the contrary we find that the proportion of recruitment from Indian colleges has actually decreased. Thus at present the average recruitment from the two sources is, 30 from source (a) and 9 from source (b), i.e., in the ratio of 77 to 23 per cent. If the recommendations of the Commission had been given effect to, the proportion of recruitments would have by this time been more than half for men from Indian colleges.

It is recommended, therefore, that proportion of recruitment should for the present be made half to half, and as time advances this proportion should rise in favour of the *alumni* of Indian colleges. Engineers have, in the design and execution of Public Works of all descriptions, to deal with local conditions. The Engineering practice, standards, and problems of a large country like India are peculiar to that country. Hence the Engineers who have received their professional education and training in the country itself, suit that country best. At present India possesses first-rate Civil Engineering Colleges, one of which is over 60 years old. It is very necessary, therefore, that the bulk of recruitment should be from Indian colleges; and rather than get recruits from outside in large numbers, the proper policy would be to keep the standard of the Indian colleges abreast of the times, i.e., up to the highest standard of Engineering practice and theory in the world.

(ii) System of Recruitment.—At present the recruitment in India is by competition, and in England by selection from amongst men trained in the colleges there. The proper system would be by competition in both countries. For the competition to be real and searching the number of appointments in any year should not exceed one-third of the number of candidates in that year.

There is one point, which it is necessary to bring to the notice of the Royal Commission specially. At present the outside age limit for Rurki Admission Examination is 21 years, and the candidate is required to be a graduate. In the Indian Universities the age limit for matriculation examination is 15 or 16 years. Hence a student can not become a graduate until after he is over 19 or 20 years of age. The Rurki College Admission Examination takes place before the results of the Degree Examinations of the Punjab University are out. Hence the candidate at best has one chance only for appearing in the Admission Examination if 15 years be the rule for matriculation, and none at all if 16 years be the rule. This anomaly must be removed and the simplest remedy is to lower the University standard for admission to Rurki Engineer Class from B.A. to Intermediate in Arts, as was the case some years back.

71,561. (II.) System of Training and Probation.—The system of training in vogue in Indian colleges is as it should be. The training is wholly directed to the requirements of the country, in colleges maintained by the State for the purpose. By the competitive system prevalent in these colleges, the best men available are chosen. The training in England is not wholly directed to the requirements of India. To remove this defect the competition examination in England should include in its curriculum—(1) One Indian Language, (2) Indian Irrigation, and (3) Indian geography, Physical and Political.

The training received by the *alumni* of Indian Engineering Colleges, is further supplemented by a period of probation for one year in the Department, which is not the case with recruits obtained from England. This probationary period in the Department in India is absolutely necessary, and should be insisted upon as an indispensable condition. It should be a probationary period in the true sense, involving selection and possibility of rejection at the end of it. Any plea that this is unfair, or will deter candidates from England by reason of the attached risk, may be met by the provision of free return passages to rejected candidates. Such a system of rejection prevails at present for recruits from the Indian colleges. But the present system at Rurki College of posting two apprentices for each vacancy and selecting one of them at the end of the prelimi-

nary period of one year should be done away with, and the system of sending out one apprentice for each vacancy that prevailed up to 1899, should be restored.

71,562. (III.) Conditions of Service.—The conditions of service as at present prevalent for the Imperial Engineers are quite satisfactory. Prior to the adoption of the recommendations of the last Public Service Commission, practically the same conditions applied to recruits from Indian colleges,—in fact they entered the Imperial Service and no Provincial Service existed. For reasons explained under head VII (a) (paragraph 71,566) *infra*, all distinctions as regards conditions of service between recruits from England and those from Indian colleges should be completely removed, and equality of treatment restored.

71,563. (IV.) Conditions of Salary.—The pay of the Indian recruited element is approximately two-thirds of that granted to officers recruited in England. This is utterly unfair and unsuitable. The resulting anomalies and defects are startling and are as follows:—

(i) The minimum pay of Indian trained Executive Engineers is much less than the maximum pay of Imperial Assistant Engineers who might be working under them.

(ii) The minimum pay of Indian trained Superintending Engineers is less than the maximum pay of Imperial Executive Engineers who might be holding divisional charges under them.

(iii) Anomalies existing in connection with local allowances as stated below.

(iv) In addition to the above, the pay granted to the Indian trained element is inadequate and is not commensurate with their work and responsibilities, which are exactly the same as those of the Imperial Engineers. That the Indian trained engineers should, under the conditions now prevailing, receive less pay than their own juniors and subordinates is simply preposterous and untenable.

It is pointed out that emoluments should depend solely on services rendered, and that all distinctions between two classes of officers who do the same work and bear the same responsibilities should be obliterated.

Local allowances.—Indian trained Engineers receive two-thirds of the local allowances granted to Engineers obtained from England. This difference is unfair, for the said allowances are always given for a specific purpose, viz., as compensation for local disabilities which equally affect both classes of officers.

Probationary period.—Not only have Indian trained officers, as already explained, to undergo a probationary period and incur the consequent risk of rejection, but even after completing such probation the period so spent is not counted for increment and promotion. This causes great inequality between the two classes of officers.

It is urged that there should be absolutely no distinction in the matter of emoluments of whatever nature, between the two classes of officers, as they do the same work.

71,564. (V.) Conditions of Leave.—There should be no difference in the matter of leave between officers recruited in England and those recruited in India. Although it is necessary that the best preliminary training ground for an engineer is his own country, there is no doubt that he is always in necessity of enlarging his horizon of experience by visiting important engineering works in other countries. This will keep him abreast of the times in his technical knowledge. This object can only be attained if leave rules are liberal. Again, the conditions under which engineers have to work are such that, unless allowed long periods of rest, their health is likely to break down. It is recommended, therefore, that the leave rules for all engineers whether recruited in England or India should be the same.

71,565. (VI.) Conditions of Pension.—As in the case of salary so in the case of pension, there should be no distinction whatever between engineers recruited in England and those recruited in India. Pensions are really deferred salaries, and it is but fair that they should depend on specific services rendered and

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not on place of recruitment. The scale of pension recommended for all Engineer officers is as follows:—

Years of completed Service.	Scale of Pension (Proportion of average emoluments).	Maximum amount to be allowed.
10	20/60	Rs. 2,000
11	21/60	2,200
12	22/60	2,400
13	23/60	2,600
14	24/60	2,800
15	25/60	3,000
16	26/60	3,450
17	27/60	3,900
18	28/60	4,350
19	29/60	4,800
20	30/60	5,250
21		5,700
22		7,150
23		6,600
24		7,050
25		7,500
26		8,100
27		8,700
28		9,300
29		9,900
30		10,500

An officer may be allowed to retire at any time after completing 20 years' service.

71,566. (VII.) (a) Such limitations as may exist in the employment of Non-Europeans.—As urged above the department should be recruited half from England and half in India for the present. The recruitment in England should be open to all British subjects equally, irrespective of domicile, colour, caste or creed. Latterly, during the existence of Cooper's Hill College, only two Indians were eligible for appointment even after competition, and at present the number of Indians eligible for appointment in England is limited to only ten per cent. of the total annual recruitment. Limitations of this nature should be removed.

(b) Working of the existing system of division of services in the Public Works Department into Imperial and Provincial.—The division of the Public Works Department into Imperial and Provincial Services has been a great mistake and has not been and can never be a success. This division took place on the recommendations of the last Public Service Commission. The grounds on which the Commission based its recommendations and remarks on them, are given below:—

(i) The Commission was of opinion that the considerations which, in respect of Judicial and Revenue Branches of the Administration led it to recommend the formation of Imperial and Provincial Services with distinct conditions of service, applied with equal force to the Department of Public Works. Now prior to the introduction of the Provincial Service in 1895, the recruits from Indian Colleges were admitted unreservedly into the Imperial Service. This vested right was interfered with by the Commission, which was really appointed to devise measures for the employment of Indians on a larger scale in the higher grades of service in all departments, and thus in a way raise the status of Indians in the services. In the case of the Public Works Department, the recommendation for the introduction of a Provincial Service was a retrograde measure, and thus the Commission evidently went contrary to its terms of references in this case. But apart from the above, there is really no analogy between provincial branches of other services and Indian trained engineers. Engineers recruited in India belong to a Superior Service, and do the same work and bear the same responsibilities as engineers recruited in England; while this is not the case with members of other Provincial Services. In the case of Engineers, those recruited in India have been borne on the same list with those recruited from England and promoted side by side with them while in other departments the lists have always been separate. This want of analogy was virtually admitted by the Government of India, when giving effect to the recommendations of the Commission.

(ii) The Commission was of opinion, that important charges, especially of Direction and Control, should be held by men recruited from England, while inferior charges should be held by men recruited from India. This assumes the existence of superior and inferior charges, while the fact of the matter is that such distinctions in charges, excepting very rare cases, do not exist. All Executive and Administrative charges during the quarter of the century that has elapsed between the last Public Service Commission and the present one, have been held promiscuously by men recruited from India and England. For the execution of the famous Triple Canal Project in the Punjab, for instance, the charges on the whole have been held much longer by Rurki Engineers than by those recruited from England, the ratio of total periods on the three canals during which charges have been held by Rurki and England trained men respectively being about 1½ to 1 in the case of Executive Engineers, and about two to 1 in the case of Superintending Engineers. The recommendations of the Commission in this respect, as implied by their opinion, were not followed, because they were really impracticable. Even in the Roads and Buildings Branch, the idea of employing men of inferior status could not be given effect to—Imperial Engineers are still in charge of Roads and Buildings Divisions.

(iii) The Commission was of opinion that Colleges in India were not capable of affording such a high standard of education as was obtainable in Colleges in England such as Woolwich, Chatham, and Cooper's Hill. Experience has proved that this notion of the Commission was not correct. Some of the alumni of Rurki College have risen to great eminence—the names of Sir W. Wilcocks, Sir W. Garstin, and Rai Bahadur Ganga Ram may be instanced in this connection. Leaving alone exceptionally good men like the above, it will be noticed that the proportion in administrative ranks of Indian trained Engineers to England trained Engineers is better than the proportion of their respective original recruitments. Now as promotion to administrative ranks is by selection only, it follows that the Indian College Engineer has proved himself on the whole as better and fitter than his English confrère in the race of official life. A close examination of classified lists over a series of years will bear this statement out. Again, some of the best authorities in the land have borne testimony to the Rurki College being equal to any similar institution in Europe, to the excellence of the Institution, and to the great ability of its alumni. It is claimed therefore that there is no difference between the professional education imparted in Rurki College and that received by the average engineer recruited in England.

All the above leads to the conclusion that the introduction of the Provincial Service in the Public Works Department was really a mistake. Other considerations bearing on the subject are:—

(a) Considering the previous history and qualifications of Indian College Engineers, they should be treated just as Indian recruited officers of some other superior Services like Accounts, Traffic (Railways), Finance, etc. (in which by the way the educational qualities required are inferior to those of the Indian College Engineer) are treated. These Services are also partially recruited in India, but all officers, whether recruited in India or England, are classed as Imperial.

(b) A number of temporary engineers, at Rurki men, long after the introduction of the Provincial Service, were made permanent and placed not in the Provincial but in the Imperial Service. They did not get guaranteed appointments, and the majority of them had failed even to secure the necessary percentage of marks required to qualify for Government appointment. If out-classed people from Rurki College, who in addition were only eligible for the Provincial Service are held to be fitted for the Imperial Service, the pick of the Indian Colleges certainly should be.

(c) There have been cases where men who could not either pass tests in, or secure Government appointments from, Indian colleges have proceeded to England and after undergoing a very meagre training

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for a short period at places like Crystal Palace, have been appointed by the Secretary of State to the Imperial Service. How, then, in the name of fairness can the pick of the Indian Colleges be barred from the Imperial Service?

(d) The institution of the Provincial Service for Indian College Engineers was in direct opposition to a definite pledge given to them in a speech delivered by Sir William Muir, Lieutenant Governor of the North-Western Provinces at Rurki on the 28th November, 1873, of which the follow is an extract. "... But apart from personal associations, there is a reason which renders the present moment one of public interest; the establishment in England of an Engineering College for India has unsettled the minds of the public here as to the prospect of this institution and the continuance to it of the patronage of Government. It has been a subject of much anxiety to myself, and of correspondence with the Government of India. It is, therefore, with sincere satisfaction that I am able to announce to you and through you to those without who are interested in the Thomason College, that the institution at Cooper's Hill will in no degree affect the relations of the Government of India with the college, nor the employment which has been hitherto guaranteed to its more successful students. Between the two seminaries there will be no opposition or antagonism. The requirements of this great country are ample for both. I am sure that you will all with me be thankful to the Governor General in Council for the justice which has thus been rendered to Rurki College."

This pledge was given shortly after the institution of Cooper's Hill College, at a time when the public in India were naturally apprehensive that the position of the alumni of the Indian Engineering Colleges in the Public Works Department would be injuriously affected, and it will be observed that it was given with the full authority of the Government of India, and possibly also of the Secretary of State. It will be noticed that the Government pledged that the institution of Cooper's Hill would in no degree affect its relations with Rurki College, nor the appointments "hitherto guaranteed" to its successful students. The appointments "hitherto guaranteed" were in the Imperial Service. Yet notwithstanding this pledge the Provincial Engineer Service, creating a great distinction between Engineers recruited in England and India, was introduced 20 years later and was based to a great extent on a mistaken comparison of the respective merits of Cooper's Hill and Indian trained Engineers. Again, it must be noted that this pledge, which is recorded in the Rurki College Calendar of 1872-73, formed one of the strongest inducements to candidates to enter Rurki College, for these men naturally believed (and it was a legitimate belief for them to nourish) that the distinction created was merely a tentative measure, and that when the organization of the Engineer Estab-

lishment came to be reconsidered, in accordance with paragraph 10 of the resolution No. 2523 G. of 1893, the said distinction would be abolished.

Public Works Department.—Thus from all considerations it is evident, that the existence of the Provincial Service in the Public Works Department stands self-condemned. It was introduced as a tentative measure for 7 years, and ever since the expiration of this specified period in 1902, a strong and persistent agitation has been going on for its abolition. The changes made in 1903, far from removing the prevalent discontent caused great resentment. Further improvements made in 1912 are considered as restoring the Provincial Service to the status it had before 1908. But the real cause of discontent still remains, and it will be removed only when the Provincial Service is abolished.

The pay and conditions of service should be commensurate with services rendered, and when Engineers from Indian Colleges have been and are doing the same work as those recruited from England, there is no reason why their place of recruitment should bar the former from the advantages of the Imperial Service.

It is strongly urged, therefore, that the Provincial Service in the Public Works Department should be abolished without loss of time.

71,567. (IX.) Other Points.—The question of cost, if the Provincial Service were abolished, may be briefly considered. The total monthly salary in the department at present amounts to Rs. 7½ lakhs in round numbers. If all the Provincial Officers were made Imperial, the extra cost would be half a lakh of rupees per month, the increase will be only 6·3 per cent. During the last quarter of a century (1885-6 to 1910-11) the general revenues of the country have risen from 7,446 to 12,102 lakhs and those of the Public Works Department alone from 743 to 2,653 lakhs. It will be seen that the proportional increase of Public Works Department revenues is about 4 times that of the general increase of revenue, and it is a sound business policy, that the employees of the department should have a share in this increase of revenue. An increase of 6 lakhs of rupees per annum on establishment due to the abolition of the Provincial Service would be infinitesimal as compared with the increase of Public Works revenue. It may also be pointed out that according to the Public Works Department Code, the theoretical percentage for Establishment on works was 23 till lately, and 21½ now, but in practice this percentage works out to from 16 to 19—or 17½ on the average. Thus there is a saving of 4 to 6 per cent. of the cost on works, in the matter of Establishment. This saving alone can very nearly meet the extra cost of 6 lakhs of rupees per annum mentioned above. Thus, on the score of cost also, the Provincial Engineer Service can be safely abolished.

LALA WAZIR CHAND CHOPRA called and examined.

71,568. (Chairman.) The witness said he was an Executive Engineer in the Provincial Service, Public Works Department, and represented the officers in that Department. He believed the views expressed in the written statement were generally agreed to by the officers.

71,569. The witness was of opinion that Indian Colleges turned out men better fitted for the Public Works Department in India than English Engineering institutions, the education in the Indian Colleges being directed more to the requirements of India. His reason for suggesting that 50 per cent. should be recruited from English institutions was in order that the change might be gradual. He desired to see competition among selected candidates in England for about half the vacancies and that Natives of India should be eligible for examination in England as well. The examination should include an Indian language, Indian Irrigation and Indian geography. This would ensure that English officers on arriving in India would know at least one Indian language and have a text-book knowledge of Indian irrigation, and an idea of the geographical and climatic conditions of the country. He did not think that would give an undue preference to the Indian. The subject of Indian

irrigation would be theoretical for both classes of students and the language standard would be only colloquial.

71,570. He had facts and figures to show that the proportion of Indian-trained Engineers to English-trained Engineers, who had reached administrative rank was greater than the proportion of their respective original recruitments, and he would place those facts and figures before the Commission.*

71,571. The witness declared that at present the period spent by Indian-trained Engineers on probation did not count for increment and promotion, and he wanted that altered so as to equalise the conditions with those of the Imperial Engineers, who had no period of probation in the Department. The Imperial Engineer came from England and had no probation while an Indian recruit had to undergo a year's probation and was liable to be rejected. If he was not rejected it was only fair that the period should count towards increment and promotion, and the salary should be the minimum pay of an Assistant Engineer.

71,572. The witness desired to assimilate pension conditions for all officers of the superior service and

* Vide Appendix No. II.

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therefore would ask for the privilege of optional retirement after twenty years' service. He himself would wish to retire after twenty years and he did not know what harm retirement at that time would do to the Service.

71,573. If the whole of the Provincial Service were absorbed into the Imperial Service and all were paid alike the witness considered the saving in Statement charges of four to six per cent. on the cost of works as explained in the written memorandum would nearly meet the whole charge. He had figures of actual expenditure on Irrigation Works in the whole of India extending over ten years, and they showed that if the four to six per cent. were applied, it would amount to about six lakhs, so that the extra cost would be met from this saving alone. His authority for quoting the theoretical percentage of Establishment charges, was the P. W. D. Code.

71,574. (Sir Murray Hammick.) With regard to leave the witness desired that all officers, Indians and Europeans, should receive the same, and he should like officers to go to foreign countries as well as to England. It was not likely that officers on leave would spend long periods in India, as they would have to do so on half salary. He did not think it was necessary to have any condition that the more favourable rules should apply only in case men went to England, because the percentage of people who would take long furlough and not go out of India would be very small, and therefore it would not be advisable to have any invidious distinction on paper.

71,575. (Mr. Abdur Rahim.) The witness said the age for matriculation in the Punjab was fifteen and men could graduate at the age of nineteen. In the United Provinces the age limit for matriculation was sixteen and for graduation twenty. He himself entered the Provincial Service at the age of twenty-two as an apprentice Engineer. He believed the maximum age for permanent pensionable appointments was twenty-five, and that gave a man ample time to earn his full pension. He believed Imperial recruits came out below the age of twenty-five. If instead of reducing the standard to the Intermediate, the age for admission to Rurki was raised to twenty-two it might solve the difficulty to a certain extent. The

(The witness withdrew.)

At Delhi, Wednesday, 19th November, 1913.

PRESENT:

THE RIGHT HON. THE LORD ISLINGTON, G.C.M.G., D.S.O. (Chairman.)

THE EARL OF RONALDSHAY, M.P.

SIR MURRAY HAMMICK, K.C.S.I., C.I.E.

SIR THEODORE MORISON, K.C.I.E.

SIR VALENTINE CHIROL.

MAHADEV BHASKAR CHAUBAL, Esq., C.S.I.

ABDUR RAHIM, Esq.

WALTER CULLEY MADGE, Esq., C.I.E.

FRANK GEORGE SLY, Esq., C.S.I.

HERBERT ALBERT LAURENS FISHER, Esq.

JAMES RAMSAY MACDONALD, Esq., M.P.

And the following Assistant Commissioners:—

D. W. AIKMAN, Esq., Superintending Engineer, Punjab.

J. W. B. LOUGHRAN, Esq., Executive Engineer, Punjab.

R. R. SCOTT, Esq., (Joint Secretary).

LIEUTENANT-COLONEL E. H. DEV. ATKINSON, Principal, Thomason College, Rurki.

Written Statement relating to the Public Works Department.

71,581. Notes on a scheme for training of recruits in India for the Public Works Department:—

(1) All recruits for the Imperial service of whatever race or creed should be paid the same and have the same rules for leave, promotion and pension.

(2) A single open competitive examination is not a suitable test for selecting candidates for the Public Works Department. For the Civil Engineering profession many qualifications other than the successful

lowering of the standard of qualifying examination for admission to Rurki, was one remedy that suggested itself to him; he was not keen on it.

71,576. (Mr. Madge.) The witness said he would not object to introducing the High School standard for Rurki as an alternative to reducing the B.A. to the Intermediate.

71,577. (Mr. Macdonald.) The witness explained that the arguments put forward in the written statement were in favour of increasing the Provincial pay, and not in favour of reducing the Imperial pay, as the present salaries were very inadequate. With regard to the possibility of the Provincial Service pay in India being better than the pay of Engineers doing similar work for large municipalities in England, the witness said he could offer no opinion upon that without a knowledge of the conditions that obtained in England. For reasons best known to the statesmen of the country the Indian Services were the best paid in the world and he did not see any reason why Engineers should be less highly paid; and he, because he was an Indian.

71,578. (Sir Theodore Morison.) The witness said he laid stress on the question of the age of entrants owing to the fact that candidates were required to be graduates. A school-leaving examination would be of no value in the Punjab as that did not obtain in that Province. He was not aware that a boy could get into Rurki under the present rules at the age of seventeen, by passing the school final examination, and if the grievance was only peculiar to the Punjab and not applicable to the majority of provinces then the grievance was very much mitigated.

71,579. (Mr. Aikman.) The witness said that it had been the practice of large municipalities such as Lahore, Amritsar and Delhi to obtain English-trained men as Municipal Engineers, mainly for the reason that sanitary engineering was better developed in England and the duties of a Municipal Engineer were mostly sanitary.

71,580. With reference to the question of teaching an Indian language to students, the witness said the method adopted for the Indian Civil Service might be adopted for the Public Works Department.

passing of examinations are necessary. Men who pass theoretical examinations with facility may turn out most unsuited for the executive grades where character, initiative power of commanding work, high ideals, &c., are required. The best method, therefore, is to recruit by competition from Colleges where the result is only attained after a course of several years during which practical work is taken as much into consideration as theoretical.

(3) For economy, efficiency, and esprit de corps, there should be one Imperial College in India for training. The Thomason College, Rurki, by virtue

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of its past history, its buildings, climate and equipment and the fact that in the opinion of a great many responsible judges, it now gives an Engineering education equal to any in England is obviously fitted to be the Imperial College. The other existing Engineering Colleges would undertake the training of the subordinate grades for their Provinces and a special College for the purpose could be built for the United Provinces. These subordinate grades might be termed the Provincial Service, but the successful output of the Imperial College would form the Imperial Service.

(4) Before the formation of the existing Provincial Service confined the Thomason College to statutory natives of India, it was open to everyone and it was the alumni of that period which have produced so many distinguished engineers, a proportion of whom actually came out from England. The present system of appointing Indians to the Imperial Service from England is the worst possible. The choice is limited to the few who can afford to go to England, and these have to undergo the temptations of life in a strange country at an irresponsible age. The climate of India and the conditions of engineering work are often so considerably different to those existing in England, especially in Irrigation and Sanitary work that, though a good sound general engineering education must be the basis, and English experience after training valuable, it is suggested that all recruits both English and Indian should be trained at the Imperial College in India.

(5) Having fixed the proportion of recruitment for the Imperial service from England and in India, an open competitive examination for entrance should be held in England and in India, not necessarily simultaneous but of the same standard. This examination should be a test of general education, chiefly in those subjects necessary for the successful completion of engineering courses. Students in England would be nominated for admission to the entrance examination, and 5 per cent. over and above the number of appointments available would be admitted to the College to allow for wastage.

(6) As regards Indians, the difficulty now arises regarding the various races in India. Some of these

are comparatively unfitted for the profession, and perhaps, being proficient in passing examinations would swamp the Entrance examination. Further, most Indians strongly object to serving in distant Provinces. The number of vacancies available in each province yearly should therefore govern the number of men admitted yearly from that province. The question of Railways would have to be settled by the Railway Board. To allow of there being a sufficient number of trained statutory natives for private work, Municipalities, District boards, &c., it is suggested that for each Province 30 per cent. more men should be admitted over and above the number of guaranteed appointments. All Indians competing for the entrance examinations in India would have to obtain nominations, by Boards consisting of the Civil Officer and Indian gentlemen of their districts to ensure they were fit to take up the positions they aspired to. In a great spending department like the Public Works Department this is a very important point.

(7) All students who duly qualified at the end of their course should be given a year's practical apprenticeship on works in India. It is doubtful if the guaranteed appointments should be given on the completion of the College course or at the end of the apprenticeship. The former is the most popular and probably practically the best method while the latter theoretically the best as it permits a man's character, energy and fitness for hard work, &c., to be judged on practical works.

(8) The final climax to the training would be to send all successful candidates to England during their first five years of service for a year's practical training. They would, by that time, have thoroughly grasped the conditions of their Indian work. They would be responsible men with a purpose in life and much less likely to be led away into idleness and dissipation. Further, each man would have specialised into his own line, Irrigation, Railway, Sanitation, Architecture, &c., and could take up his speciality. The training in England would have to be under duly constituted leadership. As the men would go home on Assistant Engineer's pay they would not necessarily be a heavy charge to the State.

LIEUTENANT-COLONEL ATKINSON called and examined.

71,582. (Chairman.) The witness said he had occupied his present position for about 12 years. He came out to India in 1887, and had served continuously in the Military Works Department, with the exception of about four years, which he spent on duty in England.

71,583. The engineer class at Rurki was a three years' course, to which 20 students were admitted yearly. There ought therefore to be 60 students, but usually a certain number failed every year, and the average was about 55. The upper subordinate class was a two years' course, to which 40 were admitted yearly, making about 80 students; and the lower subordinate class was a two years' course, to which 60 were admitted yearly. The latter number during the present year had been reduced to 40 yearly, so there would be in the future 80 students in that class instead of 120. This reduction was made because of the opening of an Engineering School at Rasul in the Punjab. All three classes were kept quite distinct within the college, with regard both to their training and to residence. They had also different teachers, in so far as they had each their own staff, but they were superintended by the professors in charge of each Department. The same workshops and laboratories were used.

71,584. The classes were drawn from the domiciled community and from pure Indians. A certain number of students in the upper subordinate class were European soldiers who were being trained for the Military Works Department. With regard to Indians of Asiatic descent, the students were limited to the Provinces of Upper India. Bengal, Madras, and Bombay were excluded. Men from the latter Provinces were only eligible for admission to their own local colleges. The reason for such limitation was, firstly, that each Province had its own college, and, secondly, that if Rurki was thrown open to free competition, it would be very much swamped by cer-

tain races who were better at examination work than others.

71,585. With regard to qualifications for entry to the College, under the present regulations, candidates had to possess either the B.A. or the B.Sc. degree, or a school-leaving certificate, with certain optional subjects added. There was very great disparity between the school-leaving certificate and the B.A. and B.Sc. degree. The school-leaving certificate had only been introduced within the last few years, the idea being to carry out the policy of the United Provinces Government which was intended to force men going into an industrial or commercial career to specialise at once instead of going up for the Matriculation and the usual University career. The B.A. and B.Sc. degree had only been left in because the Punjab, for instance, did not have a school-leaving certificate. He would not be in favour of the Bachelor of Science degree being made an essential qualification. He thought the present system was the best.

71,586. The College provided a training in Civil Engineering, Survey, Drawing, Mathematics, Physics, Electrical Engineering, Chemistry, and Mechanical Engineering, which meant the workshops. Each of those subjects might be termed a group. There was also a group which was called the Physique group, in which marks were given for athletic sports and games, and also for moral fitness. The courses practically comprised all the subjects he had just mentioned in various degrees of standard for the three classes, and combined about half as much practical work as theoretical.

71,587. With regard to practical work apart from laboratory work, Survey was done entirely outside the building. The Engineer Class went for three weeks into camp for triangulation purposes. The climax of the Civil Engineer's course in his last year was a Project, which was an independent piece of work, for

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which a student was given three months. A Project was set of such dimensions that the student would be able to complete it in the time, and it was of the same nature and standard as an actual piece of work which he would have to do when he joined his profession. That also was dealt with under about five heads—Survey, Drawing, Engineering, Mathematics and Applied Mechanics, and was marked by five independent examiners. The marks were finally all collected so as to form a real practical test for the whole course which the student had gone through during his three years.

71,588. The witness was satisfied that Rurki gave as good a practical training as could be obtained anywhere. There were no improvements which he could suggest which would make the College still more efficient as a training centre for the superior posts in the Works Department. If there were, he would have introduced them. The training was always improving from year to year. He thought at the present time Rurki had as good a staff as could be desired. He had visited some of the colleges in England. On the last occasion when he was in England eight years ago, he made an inspection of all the technical institutions, and wrote a report on them, having in mind a comparison with Rurki.

71,589. He would not care to give a definite answer as to whether the educative value of the Rurki training was as high as that of, say, the Engineering Tripos at Cambridge, because he was not placed in touch with the officers in the Service, and he could only give an opinion from mere hearsay.

71,590. As to his own scheme for training in India, the witness explained that first of all that there would be nomination from Provinces, and then a competitive examination for admission to Rurki. There would not be a competitive examination at the end of the course. The whole three years' course at Rurki was a continual competitive examination. Marking was carried on from year to year, and every man had to qualify at the end of every year, or he had to leave the College. The witness had to remove men in the course of their three years. When he first went to Rurki he found the standard was the same as at the present time, but that every year in the engineering class, six or seven men failed to qualify, were permitted to return, failed to qualify again, and were permitted to return again. Cases had occurred of men who went through their whole course without having once qualified. He protested against such a system, and the whole question was investigated by a Committee, who reported that the standard was not only a very fair one, but was practically the same as was used all over the world in colleges of the same description, and that it ought to be adhered to. Thereupon Government gave orders that in future they would not interfere with the witness's discretion in the matter. The result was that instead of having six or seven failures a year, there was now very rarely more than one.

71,591. With regard to recruitment, the witness's idea was that Rurki should be the sole channel of admission to the Imperial Service, and that the Indian colleges should devote their energies to training of the upper and lower subordinates. He suggested along with that proposal that there should be a period of training of one year in England during the first five years of an officer's service. He would not like to say whether as a result of that scheme a sufficient number of good candidates would be obtained from England, but he would regard that as a very important element, mixed up with many difficulties which he had not noted. He thought if men were brought out to India for their training it would be a very great advantage, in so far as they would learn the language, get accustomed to the conditions of the country, and probably get salted to the climate. At the same time it would be a very great responsibility to look after such men, and arrangements would have to be made for medical treatment and probably sanatoria, which would mean a very large amount of trouble and responsibility. In making his proposal the witness was rather looking at the efficacy which he considered would result from having all officers trained together in the country in which they were subsequently going to work. He had had a great admiration for Coopers Hill College and for

the spirit which it engendered, and it was, to his mind, the same sort of *esprit de corps* that was required in the Service to get work done in the best way. He thought such a spirit could only be inculcated in a Service like the Public Works Department if all men felt that they were working with brothers who had come from the same place, and that, given one Alma Mater, it should be possible to inculcate the same spirit into one's Indian brothers as it had been undoubtedly inculcated in our own countrymen. He admitted that the result of his scheme would be to sacrifice the opportunities which were now afforded by well equipped colleges and institutions in England for highly trained men to enter the service from that country. He saw very many arguments against his scheme as well as many for it. Probably it would best meet the circumstances to throw the Rurki examination open to the world, though not forcing Europeans to come out. From the point of view of economy, he agreed that the European trained in a college in England at his own expense cost the State less than a European trained in India at the State's expense.

71,592. Asked whether he did not think that *esprit de corps* might to a substantial extent be engendered by the breaking up of the division into Imperial and Provincial branches, the witness said he had always found in the various Departments that there was a great deal of feeling because one man was a Cooper's Hill man, another was a Royal Engineer, another was a Stanley Engineer, and so on. There always seemed to be a certain amount of underlying friction on account of those distinctions, and he thought the same remark would apply in the future with regard to Rurki men and other men. He would not regard that as a sign of healthy rivalry.

71,593. He regarded the year's training in England as of importance. He did not think there would be any difficulty in getting young Indians into suitable institutions or railways in England.

71,594. Speaking from his experience of the students now turned out from Rurki, the witness did not consider he would be justified in suggesting any increase in the proportion of Natives of India in the Service, because he considered that although at Rurki they could be given the best technical education which could be obtained, Rurki was not getting probably the best material to work upon. He had in view an improvement of that material when he made his proposals with regard to entry. The present proportion was 30 per cent. apart from the 10 per cent. in England, and he would be contented with that, until the material which was being received into the College improved and the results were shown.

71,595. (Sir Murray Hammick.) He held the view that all recruits for the Imperial Service of whatever race or creed should be paid the same and have the same rules for leave, promotion and pension, because the fact of two men doing the same work and drawing different rates of pay produced so much friction as to make it worth while to face the extra expense. He did not agree with Mr. Nethersole that Indian feeling would be satisfied if the difference of emoluments were extended in the form of a foreign allowance.

71,596. With regard to his proposal to make Rurki a central college for the whole of India, the witness saw no reason to anticipate any difficulty from differences of language and habits. There was at the College at the present time the same difficulty in a minor degree, in that there were Indian students and European students, who lived separately, and worked and played together.

71,597. The witness did not think his remark in the written statement that "most Indians strongly objected to serving in distant Provinces" would apply to an Indian in the South of Madras being sent to a college in the north of the United Provinces, judging from the number of applications he received from Madras and Bombay to enter Rurki; but he did find that when sending a man to actual employment, he experienced tremendous difficulty in getting an Indian to go to the Central Provinces or to Burma, because the man thought he had to settle in that province for the rest of his life.

71,598. (Sir Valentine Chirol.) Out of the 40 upper subordinates who passed out every year, 16 or 17

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obtained guaranteed appointments. Such men went out as apprentice overseers for a year on works. They had instructors who were paid by the college, and they had to send in monthly notes of their work; so that they really obtained a good practical training. The remaining 23 all obtained employment somewhere. With regard to the lower subordinate class, the 60 students (now reduced to 40) had no guaranteed appointments to look to, and as a rule it took probably a year to find work for the whole of them. If they did not prefer to wait for permanent Government employment, work of a temporary character could be found for them much sooner. One matter which the witness always complained of was that the sub-overseer, who was a man who required his practical training after his college course even more than his overseer, did not obtain it. It was only the man who went into a Government appointment who received that training. The witness had repeatedly said that every man on passing out from an Indian college should be given a year's practical training by Government. If Government would give such a training, the witness thought the value of those men would be increased, and Government would be repaid a hundredfold. He had not noticed that there had been any increase in the demand from private Indian firms for members of the subordinate classes.

71,599. (Mr. Abdul Rahim.) Students who did not want any guaranteed appointments did not come to Rurki; their one aim apparently seemed to be to obtain Government work of some description.

71,600. With regard to his remark that the college was not obtaining the best material, what he had more definitely in mind was that for positions in a big Department such as the Engineering service, men were wanted of a certain mental distinction. He was of the opinion that at the present time there were too many men who were the sons of Public Works Department subordinates, apothecaries and so on. It would be better to have a system of nomination by Indian gentlemen, to ensure that the men coming in were from the right class.

71,601. The difference between a man who had taken his degree of Bachelor of Science, and a man who came only with a school leaving certificate, was purely in the subjects of Physics and Chemistry, and to a certain extent in Higher Mathematics. He could not at the moment make any comparison between such men.

71,602. The witness's desire was to have students of a higher social status than the present class. He could give no reason why students of the former class were not at present attracted to Rurki. He was of the opinion, both from the point of view of efficiency and economy, that his scheme for a central college was a better one than a proposal which provided for the development of local colleges.

71,603. The present demands from students in Bengal and Madras and other parts of India for admission to Rurki could be met by strengthening the staff, and there would be no objection to their admission, provided that the number of students from each Province was definitely fixed.

71,604. (Mr. Madge.) Rurki possessed most excellent educational workshops. The authorities had, as regards mechanical engineering, an exceedingly difficult problem to face. The college turned out a class known as the mechanical apprentice class, which was recruited from what the witness might term educationally a very low grade man. That class was doing very well. Then there was a class called the technical class, which was supposed to be composed of higher grade men. On the recommendation of the Naini Tal Conference that class was abolished, and a still higher class was started for the relatives of capitalists and manufacturers with the idea of turning out men who might ultimately manage businesses and factories. That went on for four years, but nobody entered it. The conditions were then made easier, and at the present time, in what was called the higher division of the Department of Technology, there were about three men, very far from the class of men Government aimed at, because that class of men would not go in for industrial or mechanical engineering.

71,605. The witness had had domiciled Europeans and Anglo-Indians under him, and both classes had turned out excellent men, and each had had its failures. The good men had been as efficient as the good Indians. He had had some practical experience of the domiciled Anglo-Indian and the man imported from home, and he should say the imported man was far the better of the two.

71,606. (Mr. Macdonald.) Rurki was not maintained at all from Imperial funds; ever since the witness had known it, it had been entirely supported by Provincial funds. In that respect it was on the same footing as the other engineering colleges of India.

71,607. The marking for moral fitness was done in a negative way, in so far as there were no punishments at Rurki, except expulsion. A man who generally had been slack, unpunctual, and who had been misbehaving himself, would find at the end of his career that he had been fined a very considerable number of marks, which appreciably affected his position on the list.

71,608. Privately managed railways did not utilise Rurki to any extent for the supply of engineers and mechanics. Two apprentice overseers and one apprentice engineer were sent every year to railways and the railways assisted very much in the training of the mechanical apprentice class. He had entered into a lengthy correspondence regarding the training of permanent-way inspectors, but nothing had come of it. He had never differentiated much between privately managed and State managed railways.

71,609. (Mr. Fisher.) The witness thought the standard at Rurki was as good as that at Woolwich in certain subjects.

71,610. Comparing the mechanical laboratory of the University of Sheffield with that at Rurki, the witness said as far as he could judge from glancing through the copy of the Sheffield calendar on the table everything which was at Sheffield was at Rurki, except the Parson's steam Turbine. In the Electrical Department, he should say Rurki had a good deal more equipment than Sheffield. There was a steel testing laboratory at Rurki. With regard to the metallurgical appliances, there was practically the same equipment at Rurki as at Sheffield. He assumed that all students coming to Rurki would have passed an elementary examination similar to that insisted on at Sheffield.

71,611. Of the Indian students a very large proportion, and of the Anglo-Indians, a very small proportion were capable of undertaking Higher Mathematics.

71,612. (Mr. Sly.) The witness could not say on what basis the distribution of appointments was made between the different colleges in India.

71,613. He was conversant with the difficulty, that the present rules for admission to Rurki to a certain extent debarred graduates from entering the course owing to the limits of age; and he was shortly going to bring the matter before the Committee of Management. It would be considered whether it would not be well to raise the minimum age from 17 to 18, and the maximum from 21 to 22.

71,614. The average number of students who came up for the examination in the Civil Engineering class was 60, of whom 20 were admitted. No distinction was made between the different communities in India. The first 20 on the list, no matter of whatever race, passed into the college. The proportion of the domiciled community in the Civil Engineering class was 12 out of 60; and among the Indian students 95 per cent. were Hindus and 5 per cent. were Muhammadans.

71,615. The marks of the students were carried on from year to year, and it was not the case that there was a final competitive examination which alone determined the places of the students obtaining the appointments.

71,616. A medical test was enforced for admission into the college. Marks were given in the final examination for sports and games. Not only had a man to submit a medical certificate signed by a

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commissioned officer on entrance, but he was marked for games, gymnastics, athletics, sports and volunteering, and also for physical fitness. Before he left the college he underwent another examination by the Civil Surgeon, who gave him a certificate that he was fit for the Public Service. Such marks affected the position of the candidate in the final list.

71,617. The system of appointing two apprentices for one Government appointment was introduced about 14 years ago. He had not made up his mind whether it was a suitable system or not. Theoretically it was the best system, because in his apprenticeship a man's character and ability to push on work and take responsibility could be tested. On the other hand, it seemed very hard that a man who had worked well at college and passed out top, should perhaps eventually lose his guaranteed appointment to a man who had passed out sixth. On the whole, he would be in favour of abolishing the system.

71,618. With regard to the witness's scheme for recruitment to the Imperial Service, he would have a certain number of appointments allocated to England, to which he would add 5 per cent., and a certain number of appointments allocated to India, to which he would add 30 per cent. All candidates would go through a three years' course of training at Rurki. Both sets of students would work together, as Indian and European students did at the present moment. He did not think his scheme in practice would result in inferior men out of one section obtaining appointments in preference to superior men out of another, because that would be fixed beforehand. If actual examination results did not tally with the approved distribution of appointments as between Indians and Europeans, he would give up the method of publishing marks and would pass students out in classes. The authorities of the college were very anxious to give up publishing marks.

71,619. (Mr. Chaulbal.) He did not consider the Madras, Bombay and Sibpur Colleges, were quite as well equipped as Rurki, although they could be equally well equipped if Government chose. There was not at present the same restriction for admission into the colleges of other Provinces as there was at Rurki. So far as Madras and Bombay were concerned, it was true that only one appointment in the Imperial Service was given to each of those colleges. He agreed that supposing the Rurki standard of training was introduced into the other colleges, there might be amongst the first five or ten men who entered for the examination a few who were as good as, or better than, the five or six whom Rurki sent

(The witness withdrew.)

Captain H. DEL. POLLARD-LOWSLEY, C.I.E., R.E., Under-Secretary to the Chief Commissioner, Central Provinces, in the Public Works Department.

71,625. (I.) **Methods of Recruitment.**—The number of Royal Engineer officers permitted to be employed in the Public Works Department (excluding Railways) as sanctioned for five years, from the 1st April, 1905, is thirty and this number is at present employed in the Department. These officers leave the School of Military Engineering, Chatham, after 2 years' service and generally join the Department shortly after arrival in India. They therefore usually join the Department between the age of 21 and 22 and about 2½ years after first commission. Occasionally officers with more, and in some cases considerably more, than 2½ years' service are transferred to the Public Works Department. In paragraph 2 of Public Works Department Resolution No. 154-73-E, dated the 11th February, 1910, it is stated that for purposes of calculating the pay to which an officer is entitled, the first year of service will be reckoned to commence 2½ years from date of first commission, and the manner in which the pay of an officer, whose position on first appointment was especially fixed, shall be calculated is laid down. In paragraph 2 of Public Works Department Resolution No. 6882-E, dated the 18th January, 1911, it is stated that the manner in which the rate of pay admissible to a Royal Engineer officer who entered the Department after the 11th February, 1910, shall be the same as in the Resolution dated

into the Imperial Service every year. The reason that Madras and Bombay were given only one place was because the natural characteristics of those races were not particularly adapted for the Civil Engineering profession.

71,620. (Sir Theodore Morison.) He thought the fee at Rurki for the Engineering class was Rs. 20 a month. The college issued a memorandum of expenses, and it could be taken that the cost for a European was Rs. 120 a month, and for an Indian about Rs. 70. The cost of living had risen in India, and the students had told him they had great difficulty in keeping within those limits, and that probably it would mean another Rs. 10 or Rs. 15 at the present time.

71,621. There were no means by which students who did not obtain Government appointments could get apprenticed or pupilled at other works. The same was true with regard to the upper subordinate officer. The only reason against such a system of apprenticeship was expense. It would cost the Government a good deal to pay such people an allowance during their apprenticeship. It would be absurd to suppose that such men would pay the Government for an apprenticeship. They would not think of doing so for a moment. He did not propose to give men who had been selected in England but trained at Rurki any allowance during the time they were at Rurki. If such a system was put into force, it would mean giving everything free to everybody.

71,622. The only college which he inspected when he was in England eight years ago was Cambridge; he did not go to Glasgow.

71,623. (Lord Ronaldshay.) It was true that according to the memorandum of expenses published by the authorities of the college, it cost a European two-thirds more than it cost a native to get his training at Rurki. He could not say whether that represented the relative cost of living generally throughout India, but the probability was that it reflected general conditions.

71,624. The reason why he suggested that an Indian student should have a year's practical training in Europe was because he thought it would do the man an enormous amount of good to see the way work was done in England, and that he would be able to get some use out of it, probably more after he had seen work in India for two or three years. He strongly took the view that an Indian would benefit very much more by visiting Europe after serving some years in his own country than he would if he went to Europe merely as a student.

the 11th February, 1910. In neither of these Resolutions is the question of the seniority of officers of the Royal Engineers entering the Department considered, nor is any reference made to Public Works Department Code, Volume I, paragraph 143, under which an officer entering the Department before he has completed 2½ years' service counts his service from the date on which he enters the Department. It is also laid down in that paragraph (143) that no officer shall add more than one year to his actual service in the Department, but presumably this ruling is cancelled by paragraph 2 of the Resolution dated the 11th February, 1910.

Proposals.—(i) Officers entering the Department before they have completed 2½ years' service shall reckon their service from the date of appointment to the Department both for seniority and pay. In the case of officers who are appointed direct to the Department the date of appointment should be the date of landing in India.

(ii) Officers entering the Department after the completion of 2½ years' service and before completing 7 years' service shall reckon their service in the Department to commence two and a half years from the date of first commission both for seniority and pay.

(iii) Officers entering the Department after having completed 7 years' service or more shall reckon their

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service in the Department to commence 2½ years from the date of first commission for pay and 3½ years from the date of first commission for seniority. In the case of officers who are transferred from the Military Works Service to the Public Works Department Service service in the Military Works Service shall count as service in the Public Works Department in fixing their seniority.

The above rules when they are to the advantage of officers already in the Department should have effect from the date of their introduction, but in the case of officers who may be adversely affected by them they should not be applied. In the case of officers whose promotion has been retarded in the past the rule contained in paragraph 2 of the Resolution dated the 11th February, 1910, may continue to apply.

71,626. (II.) **System of Training and Probation.**—The present system of training at the Royal Military Academy, Woolwich, and the School of Military Engineering, Chatham, produces officers who are in every way capable of undertaking the duties of an officer in the Public Works Department. No period of probation is ordinarily necessary for Royal Engineer officers appointed to the Department and no such period of probation is laid down except in the case of an officer whom it is considered desirable to appoint to a grade higher than that of an Assistant Engineer, 1st grade (*vide* Public Works Department Code, Volume I, paragraph 144). In such cases (*vide* paragraph 145) a period of probation of six months is laid down. It would appear that the conditions of service and pay laid down in paragraph 145 should have been modified in accordance with the Resolution dated the 11th February, 1910, and the 18th January, 1911. It should be possible for the Government of India to decide from a consideration of an officer's previous records of service and reports whether he is likely to be fit for appointment to the Department or not. If, however, this period of probation is considered to be necessary, an officer should, during this period, draw the rate of pay he would be entitled to if appointed permanently to the Department and should not be placed on the pay of an Assistant Engineer.

71,627. (III.) **Conditions of Service.**—Now that officers of the Royal Engineers may no longer elect for continuous service* in India, they are liable to compulsory retirement for age under the British Service Regulations. Thus if an officer has not reached the rank of Lieut.-Colonel by the age of 50, he is required to retire from the Army and to vacate his Civil appointment under A.R.I., paragraph 1002. The rules enforcing retirement from the Army require no alteration, but retirement on account of age—under 55—should not entail the vacation of an appointment in the Public Works Department and an officer's pay and pension in the Department should not be affected by his compulsory retirement from the Army. It is true that an officer so retired may be re-appointed by the Government of India, but should there be a block in the Department such re-appointments might not be made and officers of the Royal Engineers are thus placed at a disadvantage.

The existing rates of travelling allowance particularly in the case of transfer are inadequate. There is no doubt that transfers in the interests of the Public Service must involve some expense to the officers transferred, and it is practically impossible to frame rules suitable to all cases. It is, however, suggested that the present rules should be revised and that travelling allowances should be fixed on a more liberal scale and that special rules should be framed to cover transfers.

71,628. (IV.) **Conditions of Salary.**—(1) Royal Engineers on joining the Public Works Department prior to 1906 were given the option of two scales of pay intended to be approximately equal:—

(a) Regimental pay plus staff pay according to their position in the Department.

(b) Consolidated pay depending only on departmental rank plus net military pay.

The two scales differed but slightly. Generally speaking there was practically no difference in the Assistant and Executive grades, if anything (b) was the better, and (a) was the better in the Administrative grades.

(2) Public Works Department Resolution No. 170, published in the *Gazette of India* of the 26th August,

1905, deals with the question of the improvement in the pay of Administrative Officers of the Public Works Department, and in the preamble it is recognized that the pay of Superintending Engineers, 2nd and 3rd Class, then current, was insufficient. The reasons given for the necessity for an immediate increase were (i) to maintain the highest standard of efficiency, and (ii) to retain in the service for the full term of their career officers of the highest professional attainments and ripe experience.

In Standing Order No. 228 of the Public Works Department Code, Volume I, 8th Edition of 1907, the new Civil scale was detailed and with it the scale for Royal Engineer officers on the staff scale pay. To the Standing Order were added certain notes detailing the rules laid down for Royal Engineer officers on the staff scale of pay and the conditions with which they must comply on reaching Administrative rank. From this it will be seen that such officers can only elect the improved Civil scale of pay, while from Standing Order No. 242, dated the 29th August, 1907, it will be seen that Royal Engineer officers on the old consolidated (new Civil) scale draw their Military pay proper in addition, independent of the maximum of the Department. The result of this is that of Royal Engineer officers in the Administrative ranks those on the staff scale who have drawn about the same or somewhat less pay in the Assistant and Executive grades are again, under these orders, much worse off in the Administrative ranks than those who elected the consolidated scale of pay. The difference is considerable, being Rs. 182 in the case of a Major and Rs. 304 in the case of a Lieutenant-Colonel or Colonel. By the publication of a single despatch the parity of the two scales has been entirely destroyed, and yet officers who were adversely affected are allowed no further choice in view of the entirely novel set of conditions thus introduced.

(3) Under Public Works Department Notification No. 675-694-E, dated the 24th April, 1908, an incremental scale of pay was introduced for Civil Engineers in the Public Works Department who had not yet reached the Administrative grades, as it was recognised that in the altered circumstances of the country the existing rates of pay are insufficient to ensure the recruitment of Engineers with the requisite qualifications either in England or in India, or to maintain the standard of efficiency which is requisite to the proper maintenance and control of the great system of public works on which the advance to prosperity of the country so largely depends. The result of the introduction of the new scale of pay was to increase the pay of Civil Engineers by about 16 per cent. and raise the pay of the Civil Engineers nearly to that of the Royal Engineers in the Department, *vide* columns 4 and 9 of Statement I. The pay of the Royal Engineers remained unaltered. This in the case of Royal Engineer officers on the consolidated Civil scale of pay plus net Military pay was contrary to the scale laid down in Public Works Department Code, Volume I of 1907, paragraph 10, where it is stated that "The consolidated scale of pay for Royal Engineers is the Civil scale for the time being." A further result was that Royal Engineer Assistant Engineers had to serve 11 years before promotion to Executive Engineer against 8 years in the case of a Civilian. It was evidently recognised that the above orders involved an injustice to Royal Engineer officers, as the orders were modified with back effect by Public Works Department Notification No. 154-73-E, dated the 11th February, 1910, which introduced an incremental scale of pay for Royal Engineer officers in the Public Works Department. The scale of pay gives Royal Engineer officers an average of rather less than Rs. 80 per mensem more than Civil Engineers of the same standing, *vide* columns 4 and 10 of Statement I*. The increase of pay in the case of officers of the Royal Engineers was, however, only about 7 per cent. in the case of officers of the Royal Engineers as compared with 15 per cent. in the case of Civil Engineers. Prior to the introduction of this new scale the pay of the Royal Engineer officer was about 19 per cent. more than that of the Civil Engineer. After the alteration the Royal Engineer scale was only about 9 per cent. in excess of the Civil scale.

* *Vide Gazette of India*, dated the 2nd January, 1904.* *Vide page 60.*

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The Government of India, however, again changed their attitude and in Public Works Department Notification No. 63-82-E., dated the 18th January 1911, introduced a new incremental scale of pay for Royal Engineer officers who entered the Department after the 11th February 1910. This new scale of pay was the same as that laid down for Civil Engineers in Public Works Department Notification No. 675-694-E., dated the 24th April 1908. The result of this was that Royal Engineer officers entering the Department after the 11th February 1910, will draw about 2 per cent. less pay than that laid down in paragraph 10 of Public Works Department Code, Volume I (1907), and about 9 per cent. less than Royal Engineer officers who entered the Department prior to the 11th February 1910, and this in face of the reasons already quoted for issuing the Notification dated the 24th April 1908. Further, the arbitrary fixing of the above dated (11th February 1910) has resulted in Royal Engineer officers drawing less pay than brother officers junior to them in the Corps who happened to join the Department before the 11th February 1910.

(4) In thus equalising the scales of pay of Royal Engineer officers and Civil Engineers, the Government of India appear to have overlooked the grounds on which Royal Engineer officers have hitherto been considered as entitled to the net Military pay in addition to the Civil scale of the grade for the time being. These are as follows:—

(1) Royal Engineer officers are liable to be detached for active service in time of war, and while in active service are exposed to war risks to which the Civil Engineer is not exposed unless he volunteers for active service.

(2) They are liable in the interests of the Public Service to be transferred to Military Service at any time.

(3) They have greater liabilities and expenses to meet than Civil Engineers, such as (a) Upkeep of uniform; (b) Contribution to Mess and Band Funds; (c) Enhanced rates for insurance. (In addition to this they are not allowed even to contribute to the General Provident Fund as Civil Engineers do.)

(4) They have to pass Military as well as Civil examinations for promotion—the former up to the rank of Lieut.-Colonel.

(5) Civil Engineers belonging to the Royal Engineer Special Reserve who take up an appointment in the Public Works Department are given (a) in the first instance £40 to obtain their uniform though they only require service kit and no full dress, and (b) a higher rate of pay than the regular Royal Engineer officers of the same rank while performing Military duty in England.

It is submitted that in no other Department in recent years has there been a reduction in the scale of pay. On the contrary it has generally been recognised that the increased cost of living has justified an increase in the scales of pay, yet in the face of this almost general increase the result of the Government of India Notification dated the 10th January 1911 has been actually to reduce the pay of Royal Engineer officers employed in the Public Works Department by approximately 9 per cent. below that of those who joined prior to the 11th February 1910 and 2 per cent. below that in force prior to 1907.

(5) Taking into consideration the fact that the Royal Engineer officer has liabilities which the Civil Engineer has not, it is proposed that the scale of pay of all Royal Engineer officers in the Public Works Department in the Administrative, Executive and Assistant grades should be fixed with back effect from the 8th March 1908, on the basis laid down in Public Works Department Code, Volume I (1907), paragraph 10, i.e., consolidated pay equal to the scale of pay for Civil Engineers of the same standing plus the net Military pay of rank subject to no limitation. If this be done the pay of the Royal Engineer officers in the Executive and Assistant grades will be about 15 per cent. prior to the introduction of the revised scales, while in the administrative ranks the difference and rates of pay will be exactly the same as were permissible for officers who had elected the consolidated scale of pay prior to the issue of Standing Order No. 228 of the Public Works Department Code, Volume I (1907), referred to in paragraph 2 above.

(6) Under paragraph 4 of Public Works Department Resolution No. 154-73-E., dated the 11th February 1910, the pay of an officer of Royal Engineers may not exceed Rs. 900 a month unless he holds a Divisional charge or a charge which, in the opinion of the Local Government or Administration, is of equal importance. Under Public Works Department Resolution No. 63-82-E., dated the 18th January 1911, the limit for officers entering the Department after the 11th February 1910 is Rs. 800. This ruling should not apply in the case of an officer who is reported on as fit to hold the charge of a Division but for whom no Divisional charge is available.

(7) The present division of the rank of Chief Engineer into two classes and the variation of local allowance as Secretary to a Local Government gives rise to the anomaly that the Chief Engineer may be drawing less emoluments than a Chief Engineer junior to him in service in another Province although the work and responsibilities of such posts are exactly similar. It is suggested that there should be only one class of Chief Engineer and that the salary attached to the appointment should be Rs. 3,000 irrespective of whether a Secretaryship to a Local Government goes with the appointment or not. The local allowance of Rs. 250 or 150 might in this event be withdrawn.

(8) It is suggested that the duties and responsibilities attaching to the post of Secretary to the Government of India in the Public Works Department, which appointment is invariably held by an officer specially selected from among Chief Engineers and usually of much longer service than any other Secretary to the Government of India, warrant the appointment being paid at the same rate as Secretaries in the Home, Finance and Commerce and Industry Departments, viz., Rs. 4,000 per mensem.

71,629. (V.) **Conditions of Leave.—Privilege leave.**—Under existing rules, which limit the period of privilege leave which may be taken at one time to three months, it is not infrequently impossible for an officer to avail himself of all the privilege leave which he has earned. This rule operates hardly on the officer who cannot easily be spared, or who is keen to complete the work on which he is employed. It is suggested that the rules should be framed so as to permit an officer, who, for good reasons, is unable to take privilege leave due to him within 33 months, to accumulate such leave up to a maximum of 6 months. The rule which requires an officer taking privilege leave immediately before retirement to return to duty before he retires should be abolished.

Furlough.—The rule prohibiting an officer from taking furlough till an interval of not less than 18 months has elapsed since his return from privilege leave of over six weeks' duration should be abolished. This rule sometimes prevents an officer from taking privilege leave which it may be desirable he should take in the interests of his health.

Under present conditions it is not always possible for an officer to avail himself of all the furlough which he has earned. It would be to the advantage of officers if they were permitted to commute part of their furlough on half pay into half the period on full pay. A limit might be laid down—say, the commutation of 2 years' furlough on half pay into one year on full pay. In order to prevent this concession from acting hardly in the case of an officer who, owing to his having commuted his furlough early in his service, has no furlough available towards the end of his service, when he may require it, it should be provided that an officer may recompute furlough previously taken on full pay into furlough on half pay on making good the extra furlough allowances received by him when the furlough on full pay was taken.

Study leave.—It is understood that a proposal has been made to abolish the Chatham course. If this is done the rules for the grant of study leave to officers of Scientific and Technical Departments should be made applicable to Royal Engineer officers and indeed all officers in the Public Works Department. It is, however, urged that it is most undesirable that this course be abolished. Royal Engineer officers serving in the Public Works Department are

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almost entirely out of touch with the Corps, and this course gives them an opportunity to meet many of their brother officers at Chatham, and to bring up to date their knowledge of professional subjects on which they may not have been employed in India.

71,630. (VI.) **Conditions of Pension.**—(1) The maximum pension which can be earned by an officer of the Royal Engineers in the Public Works Department is £700 per annum after 32 years' service from date of first commission. This compares most unfavourably with the pensions admissible to officers of the Indian Medical Service who can earn the following higher pensions:—

	Rs.	
Colonel of the Indian Medical Service after 30 years' service, of which 3 years' active service is in the rank of Colonel ...	825	Army Regulations, India, Volume I, paras. 726 and 728.
Colonel of the Indian Medical Service after 30 years' service, of which 5 years' active service is in the rank of Colonel ...	950	
Surgeon-General of the Indian Medical Service after 30 years' service, of which 3 years' active service is in the rank of Surgeon-General ...	1,050	

(2) Civil Engineers who joined the Public Works Department not later than 1893 can qualify for extra pensions as follows:—

Rs. 1,000 (£87-10) per annum for 3 years' service as Superintending Engineer

Rs. 1,000 (£87-10) per annum for 3 years' service as Chief Engineer.

The above extra pensions have been modified in Article 643 for officers entering the Department after 1893, and in the case of such officers only one extra pension may be drawn. No such extra pensions are permissible for officers of the Royal Engineers.

(3) The pension of an officer of the Royal Engineers who enters the Department after the 31st December, 1904 and who completes not less than 20 years' Indian service for pension is that admissible under the Royal Warrant plus such portion of the difference between the retired pay of the Royal Engineers generally and

the Indian Army pension belonging to his total length of service as is represented by the proportion his Indian pension service bears to the minimum total service that would have qualified him for the before-mentioned Indian Army pension.

(4) An officer who comes to India immediately after leaving the School of Military Engineering, Chatham, can earn his full pension of £700 a year, provided he serves continuously in India at the age of 51 or 52, after completing 32 years' service from the date of first commission. At this time an officer would ordinarily be a Chief Engineer unless he is considered unfit for advancement to that rank, but though he he may serve for a further period of three years and, say, hold the appointment of Secretary to the Government of India or Inspector-General of Irrigation he is entitled to no extra pension on this account. It is considered that an officer of the Royal Engineers, who is promoted to the rank of Chief Engineer, should receive an additional pension of £40 per annum, for each year's service as Chief Engineer up to 3 years, and that a further addition of £40 per annum should be made to the pension of an officer for each year's effective service as Secretary to the Government of India in the Public Works Department or Inspector-General of Irrigation up to three years. An officer who obtains a pension as Secretary to the Government of India or Inspector-General of Irrigation would of course draw the full pension of a Chief Engineer of three years' service in addition to the pension as Secretary or Inspector-General of Irrigation. Under these proposals the ordinary pension of an officer of the Royal Engineers in the Public Works Department will remain at £700 per annum and the maximum will be £940 per annum, which is less than that of a Colonel of the Indian Medical Service, who has done 30 years' service, of which 5 years has been in the rank of Colonel.

71,631. (IX.) **Other points within the terms of reference to the Royal Commission not covered by the preceding heads.**—There appears to be no good reason why officers of the Royal Engineers should be excluded from the benefits of the General Provident Fund. It is suggested that this should be open to them to subscribe to it.

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[Continued.]

I.—Statement showing comparison of different scales of pay of Imperial Civil Engineers and Royal Engineer Officers as revised from time to time. (Referred to in paragraph 71,628.)

Year of service.	Imperial Civil Engineers.				Difference between columns 3 and 4.		Year of Service.	Rank.	Royal Engineers.			Revised scale of pay for officers entering the service on 11th February, 1910.	Difference between columns 9 and 10.		Difference between columns 9 and 11.		Difference between columns 10 and 11.
	Rank.	Pay (old) including exchange compensation allowance.	Revised scale of pay.	Plus.	Minus.	Staff scale of pay (old) including exchange compensation allowance.			Revised scale of pay for officers in service prior to 11th February, 1910.	Plus.	Minus.		Plus.	Minus.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
1st ...	Assistant Engineer, 3rd grade.	372	380	8	...	1st	Lieutenant and Assistant Engineer, 3rd grade.	494	400	380	...	34	...	114	...	80	
2nd ...	Do. do.	372	420	48	...	2nd	Do. do.	494	500	420	6	...	...	74	...	80	
3rd ...	Do. do.	372	460	88	...	3rd	Do. do.	494	540	460	46	...	...	31	...	80	
4th ...	Do. 2nd grade...	478	500	22	...	4th	Do. do.	548	580	500	32	...	...	48	...	80	
5th ...	Do. do.	478	540	62	...	5th	Do. do.	548	620	540	72	...	...	8	...	80	
6th ...	Do. do.	478	580	102	...	6th	Do. do.	548	660	580	82	...	...	...	...	80	
7th ...	Do. 1st grade...	584	620	36	...	7th	Do. do.	548 } 574	700	620	112	...	...	...	...	80	
8th ...	Do. do.	584	660	76	...	8th	Do. do.	600	750	660	150	...	...	...	...	80	
9th ...	Do. do.	584	700	116	...	9th	Do. do.	780	(a) E. E. 800	(a) E. E. 700	20	...	...	...	...	100	
10th ...	Do. do.	584	750	166	...	10th	Do. do.	780	850	750	70	...	...	...	...	100	
11th ...	Executive Engineer, 3rd grade.	743	800	57	...	11th	Captain and Executive Engineer, 3rd grade.	885	900	800	15	...	...	...	...	100	
12th ...	Do. do.	743	850	107	...	12th	Do. do.	885	950	850	65	...	...	...	...	100	
13th ...	Do. do.	743	900	157	...	13th	Do. do.	885	1,000	900	115	...	...	...	...	100	
14th ...	Do. do.	743	950	207	...	14th	Do. do.	885	1,050	950	165	...	...	...	...	100	
15th ...	Do. 2nd grade...	903	1,000	97	...	15th	Do. do.	885 } 938	1,100	1,000	105	...	...	...	...	100	
16th ...	Do. do.	903	1,050	147	...	16th	Do. do.	991	1,150	1,050	155	...	...	...	...	100	
17th ...	Do. do.	903	1,100	197	...	17th	Do. do.	991	1,200	1,100	205	...	...	...	...	100	
18th ...	Do. do.	903	1,150	247	...	18th	Do. do.	1,143	1,250	1,150	255	...	...	...	...	100	
19th ...	Do. 1st grade...	1,062	1,200	138	...	19th	Major and Executive Engineer, 1st grade.	1,318	1,250	1,200	...	...	...	...	...	50	
20th ...	Do. do.	1,062	1,250	188	...	20th	Do. do.	1,318	1,250	1,250	...	...	...	...	...	...	
21st ...	Do. do.	1,062	1,250	188	...	21st	Do. do.	1,318	1,250	1,250	...	...	...	...	...	...	
22nd ...	Do. do.	1,062	1,250	188	...	22nd	Do. do.	1,318	1,250	1,250	...	...	...	...	...	...	
	Total	15,718	18,360	2,642	...	Total	Total	18,735	20,060	18,360	...	...	...	...	...	...	

Column 4 exceeds Column 3 by 16 per cent.

(a) Officers already in service on the 15th May, 1912, are entitled to Executive rank in their ninth year of service, but future entrants will obtain this rank in the 11th year of service, vide paragraph 2 of Government of India Resolution No. 439-458-E, dated the 15th May, 1912.

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[Continued.]

Captain POLLARD-LOWSLEY called and examined.

71,632. (Chairman.) The witness said he joined the Department when he was 22 years of age, and had been 14 years in the service. There were 30 officers of the Royal Engineers in the Department, and the views expressed in the written statement were those of his colleagues. Royal Engineer officers in the Public Works Department and the Railway Department considered that instead of being allowed the ordinary civil rates of pay, they should receive the ordinary civil rates of pay *plus* the net military pay of their rank.

71,633. The past history in regard to pay given to Royal Engineers in the Department was somewhat complicated. Before 1906 a Royal Engineer officer could choose between one of two classes of pay: (1) civil rates *plus* net military pay, and (2) regimental pay *plus* staff pay. The effect of the 1907 rules was to abolish (1) for all officers entering the Department after 15th October 1906; to increase the emoluments of Royal Engineer officers already in the Department, and drawing pay under (1) on reaching the administrative ranks, in that such officers were allowed to draw the new civil rates of pay *plus* net military pay; and to give officers already in the department and drawing pay under (2) the option of continuing on that scale in the administrative ranks or drawing the improved civil rates of pay in those ranks *without* net military pay.

71,634. In 1908 the rates of pay of Civil Engineers in the Executive and Assistant grades were increased. The increase was 16 per cent. and raised the pay of Civil Engineers in these ranks to very nearly the same as that of Royal Engineer officers already in the Department, who continued to draw pay as follows:—

(i) Consolidated.—The previous Civil rates of pay *plus* net military pay.

(ii) Staff.—Staff pay *plus* military pay and allowance of rank.

71,635. In 1910 a new scale was introduced for Royal Engineer officers already in the Department to take effect from 8th March 1908. This scale gave Royal Engineer officers pay in the Executive and Assistant grades in excess of that drawn by Civil officers by about 9 per cent. Under this scale no military pay could be drawn by Royal Engineer officers.

71,636. In 1911 the Government of India decided that in the case of new entrants only civil pay should be allowed, and no military pay.

71,637. Asked how far the 9 per cent. referred to corresponded to the amount of net military pay, the witness explained that net military pay varied with rank. A subaltern's net military pay was Rs. 70, and the average pay of an Assistant Engineer in the Civil Department under the 1910 rules was about Rs. 500, so that the percentage would be about 14; that was to say, civil pay *plus* net military pay would have given an additional 14 per cent. instead of the additional 9 per cent. which subalterns obtained under the 1910 Resolution. A Captain's net military pay was Rs. 140, and an Executive Engineer drew on an average about Rs. 1,000, and here the result was the same as it was in the case of the subaltern. The percentage was difficult to ascertain in the case of a Major. A Major was paid Rs. 180 net military pay, and probably he would be a Superintending Engineer drawing Rs. 1,500 to Rs. 1,750. Taking an average of Rs. 1,600, the percentage would still be the same—about 14.

71,638. The witness based his complaint on the following grounds: it was laid down that the consolidated scale of pay for Royal Engineers should be the civil scale for the time being. Under that ruling, Royal Engineer officers should get the ordinary scale of pay of the Civil Engineers *plus* net military pay. Actually their pay had been reduced below that. That was to say they were not getting what was laid down as their correct scale of pay prior to 1906. The order seemed to have become a dead-letter. His complaint referred both to officers who had entered prior to 1910 and to officers who had entered since, but he agreed that those who had entered in the last two

or three years had entered under definite conditions. He could not say whether there had been any falling off of recruits to the Department of late years.

71,639. The witness suggested that Royal Engineer officers should receive higher pay than Civil officers in the Public Works Department, because Royal Engineer officers had certain additional expenses, and were also liable for military service. He thought such reasons would justify Government in paying more than the civil rate. There were a good many Civil Engineers now in the special war reserve, but they were not getting any additional concessions over their colleagues.

71,640. The witness admitted, with regard to his argument for higher pay, that the whole conditions of service would have to be taken into consideration in order to arrive at a fair estimation. The conditions of pension of the Royal Engineers were considerably better than those of Civil Engineers. The Royal Engineer got a pension of £700 a year and provision was also made for his widow and children. There was no such provision for the family of the Civil Engineer. The witness did not admit, however, that that was a factor which should be taken into consideration. Royal Engineers came under the same pension rules as the Indian Army. Although they came out to India under military conditions, they actually served in civil employ. It was only in abnormal circumstances that Royal Engineers would revert to military employ.

71,641. The witness could not at the moment produce figures to shew how the civil rates of the Public Works Department compared with the pay a Royal Engineer officer would receive in his regiment, but he would send them to the Commission.*

71,642. It was true that Royal Engineers were allowed to reckon their first year of service in the Department as commencing 2½ years from the date of first commission, but that did not give them any advantage. Taking the top 15 Majors, and the top 15 Captains in the Sappers, their average age, 2½ years after commission, was 21 years and 10 months; that was to say, if they were joining the Public Works Department, they would count their service from the age of 21 years and 10 months. Taking the 30 Coopers Hill men employed in the United Provinces, it would be found that their average age on joining was 21 years and 11 months. The rule had been interpreted as meaning that an officer of the Royal Engineers who joined the Public Works Department before he had completed 2½ years' service did not count his service from the time he joined. Although he was in the Department, an officer was not allowed to count his service until he had completed his 2½ years' service from date of first commission, the witness did not think the rule was originally intended to mean that.

71,643. He could not say what was the average age at which a Royal Engineer officer joined the Department. A man generally joined before he had finished three to four years' actual service, but there were men who came in later. It was impossible to estimate the age of those men. There were not many cases of Royal Engineer officers entering the service at ages between 25 and 33. The witness desired to point out that any officer who came in late not only superseded Public Works Department officers, but Royal Engineer officers who were in the same Province. He himself had been superseded by three, but he had not considered it a matter for complaint. The men were wanted to bring up the establishment to the cadre, and had to be brought in, and they could not be obtained from anywhere else. He had suggested in his written statement that men who came in when they had had more than seven years' service should lose one year for seniority, at the same time receiving the pay which they would have got if they had joined 2½ years from the date of commission.

71,644. It might be inconvenient to Government to impose an age limit for the recruitment of Royal Engineer officers to the Public Works Department because Government might desire to bring certain

* Vide paragraph 71,662.

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men in, especially as the Public Works Department was so very short-handed. If the rule which he had just suggested was adopted, he did not think it would be necessary to fix an age limit, because it might deter officers of the Military Works Service, or other Branches of the Royal Engineers, from entering the Public Works Department late in life.

71,645. The witness could not possibly agree with the suggestion that Royal Engineers coming into the Public Works Department should be placed at the bottom of the list.

71,646. (Lord Ronaldshay.) It was the practice for a Royal Engineer to count his first year of service in the Department as commencing 2½ years after his commission, or from the date of his entering the Department, whichever was earliest, but the latest rules had gone entirely against that; he meant that paragraph 143 of Volume I of the Public Works Department still stood, but it was not observed.

71,647. The witness did suggest that in the case of an officer entering the Department after seven years' service, his first year of service should count from 3½ years after his commission, instead of 2½. The witness had no reason for suggesting the figure of 3½ years, except that he wanted to lay down something which might deter officers entering late in their service. He had taken the figure of seven years in order to give an officer a reasonable chance of putting in some service in England, and then coming out to India to join the Department if he so desired to do so.

71,648. The witness could find no rules regulating seniority. Apparently, although an officer counted his first year for pay as commencing 2½ years after commission in the Army, he did not necessarily count his seniority from the same point.

71,649. A Royal Engineer would have to retire from the Army, if he was not a Lieutenant-Colonel, by the age of 50. A Royal Engineer when he retired from the Army also had to retire from the Public Works Department, unless the Government of India re-appointed him, and the particular request which the witness and his colleagues made was that retirement from the Army under Army Regulations should not necessarily compel an officer to retire from the Public Works Department. In other words, so far as service in the Public Works Department was concerned, he should be under the civil rules for retirement.

71,650. He believed that the contributions made by Royal Engineer officers to mess and band funds were obligatory.

71,651. The Chatham course referred to in the written statement was generally known as a refreshing course. Officers went to Chatham for six months, passed through various courses in various subjects and got more or less in touch with the corps. A man had to complete 10 years' Indian Service before he could take such a course. The witness would be very sorry to see it abolished.

71,652. When serving in the Public Works Department, Royal Engineers came under the civil leave rules.

71,653. (Sir Theodore Morison.) The witness was not absolutely sure whether a sapper who was in the Civil Engineering branch, could revert to military employment. He could revert to duty in England, so

the witness took it that he could revert to military employ in India.

71,654. There was not so much discontent with the 1910 rate of pay as there was with the 1911 rate of pay. He thought future entrants would enter the Survey Department in preference to any other.

71,655. (Mr. Sly.) The reason why the witness suggested that Military Works service should count as service in the Public Works Department, was because the Military Works and Public Works Departments were doing the same kind of work. He thought a man who had been serving all his time in Military Works should be entirely fitted for the Public Works, and he did not see any reason why such a man should lose anything as compared to the civil officer.

71,656. It was very difficult to assess at a definite figure the actual expense of a Royal Engineer as compared with those of a Civil Engineer, but he thought £40 a year would cover all the items. A Royal Engineer did not reap any advantages from the special payments he had to make; he did not have a chance of wearing his uniform, and hardly ever saw the Chatham mess. Royal Engineers in civil employ would not welcome a suggestion that such payments should be abolished; they still took much interest in the corps.

71,657. With regard to the suggestion that the witness's scheme for pensions of the Royal Engineers would involve a consideration of the pensions of the whole of the Indian Army, the witness pointed out that the Indian Army had the same scale of pay as the Department. The officers of the Army rose to Rs. 700, and considerably higher if they became Generals or Lieutenant-Generals; whereas the Royal Engineers had no such prospects and had to stop at the Rs. 700 grade, and also retire at 55.

71,658. The witness thought the privilege of being allowed to subscribe to the General Provident Fund could be extended to Royal Engineers in civil employ without it being given to Royal Engineers in other employ.

71,659. (Mr. Macdonald.) The reason why Royal Engineers were in the Public Works Department was because a certain reserve of Royal Engineer officers had to be kept up in India, and there was not enough work in the Military Works Department to employ all the sappers required to be kept in India. The witness did not think it would be logical to draw the conclusion from this that when Royal Engineers had come to an end of their military employment, they must also come to an end of their civil employment. The only case in which an officer would come to the end of his military employment before arriving at the termination of his civil employment was where an officer had the bad fortune to be too old to pass his promotion examination.

71,660. With regard to the additional expenses of the Royal Engineer officer in civil employ he quite agreed that, being military charges, it seemed unreasonable to impose them upon the Public Works Department; he thought the Military Department ought to pay them.

71,661. (Mr. Madge.) The witness thought that although Royal Engineers were admitted into the Civil Department as a Military Reserve, the Civil Department obtained a considerable advantage by the introduction of Army officers.

(The witness withdrew.)

71,662. Captain Pollard-Lowsley subsequently put in the following Note comparing the pay drawn by officers of the Royal Engineers with Military Works Services in the Public Works Department under the Rules of 1911. (Government of India Resolution No. 63/82/E of 18th January, 1911):—

The attached Statement A compares the pay drawn by officers of the Royal Engineers in the Military Works Services and the Public Works Department from 2½ years to 35½ years after first Commission. An officer ordinarily arrives in India after completing 2 to 2½ years' service at about the age of 22 years,

and will usually have reached the age of 55 after 35½ years total service, when he will—if in the Public Works Department—be required to retire. No allowance has been made for periods spent on leave, as it is extremely difficult to make such allowance with any accuracy, but the matter is considered generally below. Also no allowance is made on account of officiating appointments in either service.

(2) Statements B and C show that in the Military Works Services an officer would ordinarily draw Rs. 4,09,008, while in the Public Works Department he would ordinarily draw Rs. 4,69,320. The difference

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between these figures (Rs. 60,312) does not, however, represent correctly the difference between the emoluments of the two Services for the following reasons:—

(i) In the Military Works Services an officer receives free medical attendance for himself, his wife, and children. In the Public Works Department free medical attendance is given only to the officer himself. It is permissible for an officer to compound with the Civil Surgeon for attendance on his family for one week's pay a year. If it be assumed that an officer is married by the time he reaches the rank of Captain, the deduction to be made on this account is Rs. 4,69,320 - 54,182 = Rs. 7,983. Usually, Royal

that of an officer in the Military Works Services, the prospects and amenities of the Military Works Services are a good deal better than those of an officer in the Public Works Department.

STATEMENT A.

Comparing Rates of Pay of Royal Engineer Officers in the Military Works, Services, and Public Works Department.

Year of Service after 1st Commission.	Rank.	Pay.			
		Military Works Services.		Public Works Department.	
		Rs.	a.	p.	Rs.
2½	2nd Lieutenant ...	332	14	0	380
3	Lieutenant ...	441	12	0	380
3½	Do. ...	441	12	0	420
4	Do. ...	441	12	0	460
4½	Do. ...	441	12	0	500
5	Do. ...	441	12	0	540
5½	Do. ...	533	11	8	540
6	Do. ...	533	11	8	580
6½	Do. ...	533	11	8	620
7	Do. ...	533	11	8	660
7½	Do. ...	533	11	8	700
8	Do. ...	759	3	5	700
8½	Do. ...	759	3	5	750
9	Do. ...	759	3	5	800
9½	Do. ...	759	3	5	850
10	Do. ...	759	3	5	900
10½	Do. ...	810	15	4	900
11	Do. ...	810	15	4	950
11½	Do. ...	810	15	4	1,000
12	Do. ...	810	15	4	1,050
12½	Do. ...	810	15	4	1,100
13	Do. ...	810	15	4	1,150
13½	Do. ...	1,177	13	2½	1,150
14	Do. ...	1,177	13	2½	1,200
14½	Do. ...	1,177	13	2½	1,250
15	Do. ...	1,177	13	2½	1,250
15½	Do. ...	1,177	13	2½	1,250
16	Do. ...	1,259	9	1	1,500†
16½	A.C.R.E. ...	1,259	9	1	1,500†
17	Do. ...	1,259	9	1	1,500†
17½	Do. ...	1,259	9	1	1,500†
18	Do. ...	1,259	9	1	1,750§
18½	Do. ...	1,681	11	1	1,750§
19	Do. ...	1,681	11	1	1,750§
19½	Do. ...	1,681	11	1	2,000†
20	Do. ...	1,681	11	1	2,000†
20½	Do. ...	2,106	5	11	2,500†
21	Do. ...	2,106	5	11	2,500†
21½	Do. ...	2,106	5	11	2,750
22	Do. ...	2,106	5	11	2,750

* Includes Exchange Compensation Allowance.

† Includes Rs. 30 per mensem House Allowance.

‡ Superintending Engineer, Class III.

§ Superintending Engineer, Class II.

|| Superintending Engineer, Class I.

• Chief Engineer, Class II.

• Chief Engineer, Class I.

(3) If the above be taken into account, the emoluments of the two services compare as follows:—

Military Works Services—Rs. 4,09,008 + 40,900 = 6,000 = Rs. 4,43,908.

Public Works Department—Rs. 4,69,320 - 7,983 = Rs. 4,61,337.

The difference between the emoluments of the services is, then, Rs. 17,429 in favour of the Public Works Department.

(4) Against this advantage in the shape of pay, the officer in the Military Works Services has the following advantages which it is not possible to assess:—

(a) He can continue in the service after the age of 55 and is eligible for promotion to the rank of General Officer, while an officer in the Public Works Department is obliged to retire at the age of 55. General officers are entitled to the following pensions:—

	£
Major-General ...	800 (per annum)
Lieutenant-General ...	900 " "
General (after three years from date of promotion to Lieutenant-General) ...	1,000 " "

In the Public Works Department an officer of the Royal Engineers cannot obtain a pension in excess of £700 per annum.

(b) As an unmarried officer, he is often able to live in a mess at a cheaper rate than an officer in the Public Works Department can live in his own bungalow.

(c) As a junior officer, he draws travelling allowance at Rs. 5 a day, while in the Public Works Department an Assistant Engineer draws Rs. 4 a day when his salary is less than Rs. 500.

(d) Stations in the Military Works Services are generally better than in the Public Works Department.

(5) The above notes show that while the pay of a Royal Engineer officer in the Public Works Department is, roughly, only about Rs. 17,429 better than

STATEMENT B.

Showing the total pay drawn by an officer in the Military Works Services (excluding all periods of leave except privilege leave).

		per mensem.		Rs. a. p.	
		Rs.	a.	p.	
6 months at	332	14	0	...	1,997 4 0
4 years	441	12	0	...	21,204 0 0
4 " "	533	11	8	...	25,619 0 0
4 " "	759	3	5	...	36,422 4 0
5 " "	810	15	4	...	48,657 8 0
5 " "	1,177	13	2	...	70,744 6 0
4 " "	1,259	9	1	...	60,459 4 0
4 " "	1,681	11	11	...	80,693 12 0
2½ " "	2,106	5	11	...	63,191 1 6
Total ...					409,008 7 6

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CAPTAIN H. DEL. POLLARD-LOWSLEY.

[Continued.]

STATEMENT C.

Showing the pay drawn by an officer of Royal Engineers in the Public Works Department under the rules of 1911 (exclusive of all periods of leave except privilege leave).

STATEMENT C.					Rs. per mensem.	Rs.
owing the pay drawn by an officer of Royal Engineers in the Public Works Department under the rules of 1911 (exclusive of all periods of leave except privilege leave).					850	10,200
					900	10,800
					950	11,400
					1,000	12,000
					1,050	12,600
					1,100	13,200
					1,150	13,800
1 year at	380	...	...	...	1,200	14,400
	420	...	...	...	1,250	52,500
" "	460	...	...	...	1,500	54,000
" "	500	...	...	...	1,750	63,000
" "	540	...	...	...	2,000	48,000
" "	580	...	...	...	2,500	60,000
" "	620	...	...	...	2,750	16,500
" "	660	...	...	...		
" "	700	...	...	...		
" "	750	...	...	...		
" "	800	...	...	...		
					Total ...	Rs. 469,320

F. M. PURVES, Esq., Temporary Engineer (Irrigation), Punjab.

Written Statement relating to the Public Works Department.

71,663. [Note.—The first intimation received by Temporary Engineers that their Service would have to submit a Written Statement was received by wire No. 02253 E. addressed to Mr. F. Marshall Purves on the 6th October 1913. The time at disposal for the submission of a Statement, on a subject fraught with issues so momentous to a large body of Professional men, has been quite insufficient to admit of completeness. This Statement can only, therefore, deal with the general conditions of the Temporary Engineer Service, and it is earnestly requested that the various Provincial witnesses, who, it is hoped, will be summoned, be given opportunity to explain the special considerations affecting the conditions of Service, which vary in matters of detail in each Province.

The Non-controversial Written Statement prepared under the orders of the Government of India on the Public Works Department, makes no mention of Temporary Service, presumably because even now after over twenty years of regular employment, the Temporary Engineer has been allotted no recognised niche in the economy of State Service. It, therefore, becomes imperative that this one deals more fully with the Temporary Engineer Service than might, otherwise have been necessary.

The Provincial Service, which includes a somewhat smaller number of men than those in Temporary Service, has been allotted two Co-opted members and suitable representation by witnesses; but the latter Service has only to be represented by one general witness, which is quite inadequate, and it is, therefore, feared that the importance of the Temporary Engineer Service will not receive its just recognition. This Written Statement does not deal with Temporary Engineers in the Railway Branch.]

71,664. The Public Works Department is composed of several Services, the members of which, though recruited on a differentiating scale, carry out the same duties in the various branches. The Services are distinguished as—

(1) Imperial Engineers, with certain favourable Rules; Imperial Engineers with less favourable Rules; and Royal Engineers.

(2) Provincial Engineers, with extremely unfavourable Rules.

(3) Temporary Engineers, with no fixed Rules, beyond those applicable to purely Temporary Service; a few Engineers, covenanted in England for fixed terms, are included.

The Department suffers greatly in efficiency from such a composition as that described above, and the general opinion of all India-recruited Engineers, which include a large proportion of Imperial Engineers, would seem to be that all Engineers should be on an equality in respect of all matters touching salaries, leave and Pension Rules, and general conditions of Service.

Many and various are the arguments in favour of, and against, the salaries of Provincial Engineers being on a lower scale than those of Engineers re-

cruited in England. Justification for such differentiation would only exist if the Engineers imported were specialists. But there is no evidence to show that they are specialists in any higher degree than men trained in India.

It is not intended to further comment on the Permanent Services in this Memorandum, for, no doubt, full consideration has been given in their Memoranda to all questions of salary, service, etc. But it will be necessary to introduce the conditions of Permanent Service, for purposes of comparison. Without such comparison the disadvantages, which dog the Temporary Engineer in respect to pay, position and prospects cannot be placed in their correct perspective.

71,665. TEMPORARY ENGINEERS.—Definition.—Temporary Service is one carrying a definite rate of pay sanctioned for a limited period (Article 77, Civil Service Regulations) and this kind of service has always been in vogue; but the present day Temporary Engineer is practically permanent and is in reality only temporary in name. This will be elucidated in the course of this Statement.

71,666. Method of Recruitment: WITH BRIEF HISTORY.—Hitherto there has been no special method of recruitment and men considered suitable have been, from time to time, added. So that the Service now includes:—

(1) Men with Diplomas from Indian and English Engineering Colleges,

(2) Men with experience gained elsewhere, and

(3) Men without Diplomas, who have been nominated and trained from the beginning, by the Government.

Over twenty years ago there was a great block in the Public Works Department and many members of the Department were, of necessity, kept in Sub-Divisional charge for periods extending to fourteen and fifteen years as Assistant Engineers. Government then appear to have adopted the principle of recruiting Temporary Engineers, seemingly to fill the lower posts for the purpose of facilitating promotion in the permanent ranks, without any consideration of the effect on the position and prospects of the Temporary Engineers, so employed, and without declaring such intention to those most nearly interested. Had this intention been made known few, if any, of the men of the class now in the service would have accepted so invidious a position, except from direct necessity. Synchronously with this form of recruitment special retirement rules were introduced, and recruitment to the permanent ranks was reduced to a very large extent, while the recruitment of Temporary Engineers continued with unabated vigour. The result of these measures was to largely deplete the Department of Permanent Engineers, and it became obvious that the Temporary Engineer must be employed permanently to keep up the strength of the Department, whose activities, in all directions, have increased enormously. In the earlier days attempts were made to recruit suitable men, on purely temporary work; but this proved to have been a failure, and it was seen that it would be most advantageous for Government to recruit young Temporary Engineers, train

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[Continued.]

them and employ them continuously without incurring any liability in respect of pensions. This latter procedure was specially necessary in the case of Irrigation Officers; for Irrigation is a specialised branch of Engineering, and whatever a man's Engineering knowledge, a sound training in his special work is essential in the case of an Irrigation Officer.

Though it was clearly understood several years ago that the Temporary Engineer had come to stay, and was in all respects, except pensions, practically permanent, no special rules with reference to recruitment, salary, leave, and general conditions of service were promulgated. As it was in the beginning so it is down to this time, that men—trained professional men—have to work on under conditions, which would not be tolerated in private concerns. That Temporary Engineers have borne patiently their burdens, has seemingly been assumed as a sign of contentment; but it does not appear to have been conceived as possible, that a sense of dignity would enable a Temporary Engineer Officer to suffer in silence, and a sense of duty support him to do his best under all conditions. It has generally been accepted that the employment of Temporary Engineers for long periods on general work without special rules, has been a serious mistake; but no one in authority has considered it either his duty to his Government, or to his neighbour to remedy, by some worthy scheme, the unhappy state of affairs. But one attempt alone has been made to face the situation, and that was by a former Secretary to Government, in January 1913, who suggested, that subordinates should replace Temporary Engineers, who in turn were to be cast adrift, because "Temporary Engineers become discontented and inefficient"—a comment as unhappy as unfortunate.

It cannot be wondered at that Temporary Engineers are discontented, but it comes as a surprise that, therefore, they are considered inefficient. If discontent spells inefficiency, then there are many others, besides Temporary Engineers, who might be classed as "inefficient." The scheme, however, since it offers no material advantages but the great disadvantages of increased expenditure with decreased efficiency, is not likely to be carried out to the bitter end. Thus the only attempt to do something—anything—to remedy a state of affairs which is becoming daily, both to the Government and to men concerned, more and more untenable, still leaves the Irrigation Temporary Engineer at least, where he was—neither wiped off the face of the troubled waters, nor impressed. Further on, proposals will be put forward which will possibly be found to be of equal advantage to Government and to Temporary Engineers generally. Unless the Service is vastly improved, false economy is bound to bring its own retribution, in the introduction of an inferior class of men, who, besides being less efficient, will not possess that high code of honour which has hitherto obtained and without which an important Department cannot be efficiently officered.

71,667. Conditions of service.—The appointment of every Temporary Engineer is sanctioned for 12 months at a time, for each calendar year, and every man is liable to discharge with one month's notice.* This is in accordance with what is known as purely Temporary Service. Temporary Engineers are employed ostensibly, as put forth in the Public Works Code to allow of the expansion and contraction of the Permanent Engineer Establishment, according to needs, and have no special rights and privileges. In actual practice, however, Temporary Engineers have really been employed as part of the regular permanent establishment, without one single right or privilege accorded to the Pensionable Permanent Establishment. That they are practically permanent is proved by the facts that:—

(1) They have to pass all Departmental Examinations and Tests under pain of loss of increment.

(2) They are forced to subscribe to a General Provident Fund.

(3) It has lately been decided by Government that increments shall only be given once every two years,

* Vide Appendix III.

so that the Temporary Engineers may not rise too rapidly. This latter clause leads to the obvious conclusion that the Temporary Engineer is to be retained for long periods. For, when a young man starts on 200 rupees per mensem, it will take him 24 years to get to the maximum salary of 800 rupees per mensem, with an increment of 50 rupees given every two years. Can it really be expected that any man will rest contented for several subsequent years before retirement, on a salary of 800 rupees per mensem? There are a very large percentage of Temporary Engineers, ranging from 5 to 42 per cent. of the Permanent Establishment in the various Provinces; and these men have been employed for long periods; so that the contention, hitherto put forward, that Temporary Engineers are employed for flexibility must go by the board; and is, under the circumstances explained, untenable. The enormous extensions taking place all over India to irrigation and other works, accentuates the fact that the Temporary Engineers at present employed, whatever the future may bring forth, must be retained in permanent employ; not only to carry out works but to adequately maintain them. What form that permanency might reasonably take will be discussed later.

The disabilities of the Service, as put forth briefly below, though in themselves serious enough, lead to much friction in detail between Permanent and Temporary Engineers, which ought not to be allowed to exist, as it detracts from general efficiency. It will serve no useful purpose to elaborate this statement by examples; but, when the members of one class of Public Servants carrying out the same work as another and more favoured class are treated as Ishmaelites, there is serious cause of apprehension that Government interests will suffer. The main grievances of most Temporary Engineers may be summed up briefly as follow:—

(a) Uncertainty of tenure of office in spite of years of loyal service.

(b) Insufficient prospects, with uncertainty and inequality in increase of salaries.

(c) Inability with reference to (a) and (b) to make future provision.

(d) The absence of any definite rules to suit the present conditions.

(e) The insufficiency of provident provision in lieu of pension.

(f) The exclusion of Temporary Engineers from any right to Divisional charge, and their consequent liability to serve under their juniors in the permanent service.

Before proceeding to formulate proposed remedies it would appear to be necessary and appropriate to give some details under the above headings, so as to bring out the fact that the grievances are real, and are the consequences of the existing conditions under which so-called Temporary Engineers are forced to serve.

(a) Insecurity of Tenure.—Though a man work as ten, and though his service be 5, 10, 15, or even 20 years he is annually reminded that he is less than mortal, in that his existence in the Department may only extend to one year, and that he may besides be discharged with one month's notice, and no question answered. This annual reminder must in time have a most baneful effect. It is seemingly intended as a protection; but a great Government should surely so treat its employes as to ensure that the conditions of the service, would in itself be a guarantee of good faith. Besides, Government still possesses the inestimable advantage secured by the faith of its employes in its eventual justice and fair treatment; however long that justice, as in the case of Temporary Engineers, be delayed.

The fact appears to be that no regular policy has ever been formulated by Government, with reference to Temporary Engineers and the line of least resistance was, in the beginning, eagerly followed. The doctrine of economy with efficiency has appeared such an easy solution, that its limitations have not been foreseen. Men have worked faithfully with always the eternal hope of good work being rewarded by better prospects. Young men, eager to work, have not been too particular to look into conditions of service, always trusting that Government would, of its

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own accord, and in its own interests, improve matters. Men have believed that in course of time they would be put on to the Permanent Service, and this hope has had foundation in the fact that several Temporary Engineers have at various times been given pensionable appointments. At various times men have been brought out from England on fixed covenants. At the end of their respective terms the majority of these men were transferred to the Pensionable Service, while others retired, and a few were brought on to the Temporary List. Temporary Engineers had thus a real grievance in that the men put on to the Pensionable List on the completion of their terms, were so transferred over and above the heads of many Temporary Engineers engaged in India, who were senior to them. The last of such men were transferred as late as September, 1911. The grievance lay entirely in the fact that men, senior to them were not likewise transferred to the pensionable staff. But apparently there has been no system whatever in the selections hitherto made; and it cannot be contended that the men placed on the pensionable staff were exceptional; for, in the Revenue work of Canals, a high average of excellence is the rule, and pre-eminence the exception. There have always been as good men, who are still on the Temporary List, as those made permanent. It was hoped that when the cases of Imperial and Provincial Engineers had received due consideration, the position of Temporary Engineers would also be improved. There is ample proof to show that Temporary Engineers now in service have done excellent work, in spite of the insecurity of their state. And the fact that so many men have outlived the conditions is a splendid proof of good work done, and it is not unnatural to speculate on the question as to how many, better paid pensionable men, would have stood the same test for years.

The fact that a Temporary Engineer can be got rid of with one month's notice, whatever his service, is often, or appears to often be, used as a means to lever him out without any regular enquiry, or without any charge made. The chance of replying to any alleged fault has been arbitrarily withheld; and as this is not done even in the case of permanent men in the lowest grades, who are given every opportunity of defence, it appears specially unfair in the case of officers.

(b) *Insufficient prospects, uncertainty and inequality in increase to salaries.*—The prospect held out to Temporary Engineers is gloomy in the extreme, and, as pointed out above, men have forced themselves to accept things in the hope of eventual betterment, and have preferred to hold to such possible chances, rather than become rolling stones. Government has practically the monopoly of all Engineering works in India, and specially in the case of Irrigation; so that once a man has specialised in this latter branch of Engineering, he may expect no appointments outside Government service. But other branches have also to specialise. And since Government has the patronage of practically all appointments open to Civil Engineers, the Government's responsibility, it will be admitted, can scarcely be said to end in the case of men who have served loyally and well for years when the last pay bill has been settled, at the end of the month's notice. But Government does nothing to aid a man to get employment elsewhere, though he be discharged for no fault of his own. It appears incumbent, therefore, that some endeavour should be made to secure the man further employment, considering that Government is in a far better position to ascertain where appointments are vacant, than the private individual.

According to the latest order a Temporary Engineer may not rise to more than Rs. 800 per mensem; except in very exceptional cases when the Local Government may employ men up to a salary of Rs. 2,500 per mensem for a total period of two years. According to the Public Works Department Code originally the maximum salary of a Temporary Engineer was fixed at Rs. 950 per mensem, in 1908 that rule was cancelled, but was only replaced lately, by a decree that Temporary Engineers were to get increments of 50 rupees after every two years of approved service, and would not rise to more than a maximum

of Rs. 700 per mensem. This latter has since been increased to 800 rupees. These orders have formed the subject of a Memorial by the Temporary Engineers, Punjab, copy of which is attached*. A perusal of this Memorial will bring to light, lucidly, the distinctly poor outlook of the Temporary Engineer. There are, however, several men who draw more than Rs. 800 per mensem; but it is presumed that this is because the order restricting salaries has only been lately issued.

In giving increments no special rule appears to have ever been followed. Some men getting annual increments of Rs. 50, with an occasional increment of Rs. 100; while others have received no increments for periods extending from two to five years. An increment is supposed to depend on the recommendation of a Temporary Engineer's immediate superior. One such superior may be satisfied with little, another may want a great deal before he gives his recommendation. Again, a special recommendation may be gained by chance on some special urgent work, or it may be held back because circumstances may have rendered it impossible for a man to show all the progress expected. The immediate superior's recommendations are endorsed or modified by the Superintending Engineer, and either acted on or otherwise by the Chief Engineer. One Superintending Engineer may have one criterion and another a different. Again, in the course of his tour, a Superintending or Chief Engineer might be impressed favourably by some work done by some particular Temporary Engineer. Enough weight does not appear to be given to the conscientious carrying out of "the daily round, the trivial task." This personal element is not allowed to influence the increments of Permanent Engineers and, therefore, should not influence those of Temporary Engineers. From what has been said, it will readily be seen that the want of system in granting increments is unjust to the individual, and is one of the many causes of discontent.

(c) and (e). *Inability with reference to (a) and (b) to make adequate provision for the future.*—Insufficiency of Provident provision. The market value of a Civil Engineer in India is fixed by the salaries given by the Government itself to its permanent staff, it is reasonable, therefore, to expect that the Temporary Engineer should at least draw the same salary as his permanent brother. But the fact, that he can hope for no pension, nor any provision in lieu of pension, renders it still more reasonable to maintain that the temporary man should get a higher salary. Pension is accepted as "deferred pay" and apparently is calculated at 25 to 33 per cent. of a man's salary. It might not, therefore, be unjustifiable for a temporary man to expect a higher salary, than the permanent men, of 20 per cent., a portion of which might be given in the form of better Provident rules. A Temporary Engineer has, along with his permanent brother to live like an officer and a gentleman, and is expected to maintain his official position in exactly the same degree; and thereby his ability to make provision for the future is considerably crippled, since his salary is uniformly less than that considered necessary for the permanent man of equal service. Upper subordinates, who are on the Temporary List, are usually given higher salaries than permanent men of equal standing, and it, therefore, is unjust that a Temporary Engineer Officer should be treated with less consideration.

It has been lately ruled that all Temporary Engineers must subscribe 9½ per cent. of their salaries to a Government General Provident Fund, the interest accruing at the rate of 4 per cent. compound. Now it is quite possible, by judicious investment, to obtain a better return in India; so that in the long run the Temporary Engineer may gain very little from this enforced saving. This Provident Fund is, therefore, not entirely satisfactory, but it enables the Government to say at the end of a man's service that he is not quite destitute. Railway Temporary Engineers, however, have special rules, whereby Government adds from 75 to 100 per cent. of what each Engineer deposits. It will thus be clear that the Temporary Engineer has small ability to make adequate provision for the future, owing to increased

* Vide Appendix IV.

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cost of living, and lower salaries than those considered sufficient for the Permanent Services.

(d). *Absence of definite rules.*—There are, as shown before, no satisfactory rules regarding salary and increments, no pension and most inadequate leave rules. Such leave rules as exist compare most unfavourably with those governing the Permanent Establishment, and as the reasons for granting leave to the former ought to be exactly the same as those applicable to the latter, the distinction is neither just nor humane. The leave rules of Temporary Engineers are for those in purely temporary employ, and are governed by the Civil Service Regulations, Articles 242, 336 (rule 1) and 339 (rule 2) and as laid down in Chapter I, para. 3, rule IV, of the Public Works Department Code, Volume I (9th edition). Accordingly, a Temporary Engineer is allowed privilege leave, if no substitute is required (Article 242-A), but as a favour the operation of this Article has not of recent years been put into force. Still the rule exists. But the time of taking such privilege leave is fixed by the consideration that the Temporary Engineer has to work for three months after his return before the termination of his services. That is, he must return from his privilege leave by the 1st October. And, during this period of three months enforced work, he is practically debarred from his right or option of terminating his service by a month's notice.

Furlough has occasionally been allowed as a special favour; but this has been restricted to one year, whatever a man's length of service.

It is hoped that it has been made abundantly clear that such leave rules as exist, having been formulated with reference to purely temporary service, do not, and cannot, satisfy the needs of the service as now existing.

(f). *Whatever the length of service, no Temporary Engineer has any right to Divisional charge.* And since Permanent Engineers, if found fit, have to be put into Divisional charges after ten years' service, and there are several Temporary Engineers with far more experience either under Government or elsewhere, it stands to reason that many such Temporary Engineers are forced to serve under their juniors. It needs no special perspicacity to see that such an arrangement is extremely detrimental to Government interests. The position of a youthful Divisional Engineer, who is supposed to keep in check and issue instructions and orders to a man his senior in service and experience is a very difficult one. He must, if he is wise, allow his Assistant an extremely free hand, or if he try the curb find himself professionally unseated. Again it is an accepted fact that after a certain period of work as an Assistant a man is better fitted for Divisional work and if a Temporary Engineer is kept too long as an Assistant, his work suffers and he is unjustly considered unfit, though he would probably make an excellent Divisional Officer. In any case Government interests must suffer. Further a subordinate raised to the Permanent Service, may in course rise to be the Executive Engineer of the Temporary Engineer, under whom he may have formerly served.

There are at present a few Temporary Engineers holding Divisions; but the tenure of such offices is insecure, for at any moment they may have to revert, to satisfy the demand of the younger permanent men who are attaining the service, after which they will lose salary, if retained as Assistants. In this as in all other matters where the interests of Temporary Engineers clash with those of permanent men, the former must give way, as having no rights or privileges (though many a moral claim) to consideration.

A further and more serious grievance, which affects all Engineers alike, but which has a greater effect on Temporary Engineers, is the method by which the system of Confidential Reports is worked. It is generally felt to amount almost to a scandal. If a man's conduct or work has been unsatisfactory a Confidential Report is the best medium for bringing such to the notice of higher authorities, for it protects the prestige and influence of an officer; but the substance of such reports should be brought to the attention of that officer, with the view of giving him a fair opportunity of explaining himself or of mending his ways; and to

check any possible tendency on the part of a reporting officer to personal bias. Unfortunately cases, where men have misused the Confidential Report, are not entirely unknown. It is understood that in former times there was a rule that the purport of an unfavourable report should be communicated to the individual concerned; but this rule has either been cancelled or has fallen into disuse; and it certainly should be re-introduced.

71,668. *FINAL PROPOSALS.*—Memorials* setting forth grievances with prayer for reliefs have been submitted to the Government of India, by the majority of Temporary Engineers in India, who have been referred to the Royal Commissioners. The eventual solution of the questions which weigh so heavily on an important section of the Public Works Department, rests on the recommendations which may be considered necessary by the Royal Commissioners; and it is here earnestly requested and hoped that such recommendations will be made as early as may be consistent with other public interests. Since the improvements made in the Permanent Service in 1908, Temporary Engineers have been hoping for similar improvements in their service, and have thus already waited patiently for five long years, it is therefore hoped that such recommendations as seem fit and proper will not be delayed till the final operations of the Royal Commission are completed. "*Bis dat qui cito dat.*"

It has long been evident that Temporary Engineers form an integral part of the Permanent Establishment, and they perform the same general duties as permanent men, and are not now employed for special works. Nor can it be reasonably asserted that they are employed to give elasticity to the Department, for the majority have served for long periods, and since Engineering works are being extended and enlarged, Temporary Engineers are very likely to be employed for several years to come. In short the men now in service will have to be employed permanently, and even the youngest will, in all likelihood, be employed till he is superannuated at the age of fifty-five. The Civil Service Regulations themselves show that the principle of assuring a permanent tenure of office during good behaviour and efficient service, is generally admitted, and is, indeed, regarded, as of supreme importance. Therefore, it seems that all Temporary Engineers having proved themselves to be efficient and of permanent use to the Government should be placed on the Permanent Pensionable Scale. There can be no question, from any point of view, except that of false economy, but that this should be done; but the stumbling blocks hitherto in the way of this desirable solution have been—

(1) That the cadre list, which limits permanent Engineers to 946, is complete.

(2) That the introduction of several Temporary Engineers would interfere with the vested rights of certain Permanent Engineers.

With reference to (1), the increase of the cadre list lies in the hands of the Secretary of State for India, and there is little doubt that sanction to a reasonable increase could be obtained by a clear explanation of the situation, and by showing the necessity. Arguments in favour of such increase can be adduced, not the least being the great importance of having a contented body of men to carry out works of unlimited importance to the welfare of India.

Referring to (2), the Government Resolutions referred to before, have given a time scale of increments to all Permanent Engineers, with the proviso that, unless given Divisional charges after ten years of service, no further increment is possible. Can such a proviso be carried out with any justice? It is believed not, and it must follow that men will continue to get their increments regularly, even if not in Divisional charge. This will dispose of one aspect of the question. Now, the Divisional Officer—called the Executive Engineer—was in former years a true Executive officer; but time has brought many changes, and has increased his work so enormously that his work lies more in the administrative line than in the Executive. The work of Divisional charges has increased so enormously in late years, that it is no exaggeration to say that an Executive Engineer is unable to attend

* Vide Appendix IV.

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to his work with any satisfaction to himself. It has become gradually most imperative to reduce the sizes of Divisions, so as to enable the Executive Engineer to pay more attention to his proper professional work which often has to be entirely carried out by his Assistant without sufficient checks. Smaller Divisions would enable the Executive Engineer to also give personal attention to schemes which, for want of time at disposal, have to be put off from day to day. Thus, by an increased number of Divisional charges, an absolute necessity as things now stand, the introduction of senior Temporary Engineers would have no malign effect on the existing prospects of the Permanent staff. It is, therefore, proposed that all Temporary Engineers now in service, who have completed four years' service, should be put on to the Permanent Pensionable staff. Temporary men in the Roads and Buildings, being so few in number, could readily be absorbed into the Permanent Service without special arrangements.

There are a certain number of Temporary Engineers with Diplomas from Indian Colleges, which date back to a time anterior to that when Indian College Engineers were relegated to a Provincial Service; there are others with English Diplomas which are accepted by the Secretary of State as sufficient for the Imperial Service; there are still others who were brought out under covenants, with promises of permanency at the end of the covenanted period, who have been placed after completion of their terms on the Temporary List. It is expected, if the proposals set forth are accepted, that these three classes of Temporary Engineers will be placed on the Imperial scale of pay. There are, however, some men, to whom such pensionable service would not appeal, and these would be men who, having served elsewhere, have entered Government service somewhat late in life and would not be eligible for an adequate pension. For these men, and for those under four years' service, a special non-pensionable service should be inaugurated, on the following lines:—

(1) Salaries 10 per cent. above the Permanent scale, with annual increments.

(2) Leave rules in every respect the same as for the Permanent service.

(3) Provident Fund similar to that in force on all the great railways, namely, an equivalent of 10 per cent. of salary contributed six-monthly or annually by the Government.

(4) Men to be eligible for absorption into the pensionable service from time to time, which could be effected by a slight decrease in the recruitment of Permanent Engineers. This latter clause would possibly meet the desires of all the young men. All Provident Fund additions made by Government would, of course, be deducted, as soon as these men were placed on the Pensionable List.

Eventually this Permanent Non-pensionable List would cease to exist, except for the few men who found it more satisfactory not to accept pensionable appointments. The rules governing the regular Permanent Establishment would, of course, be in force for the Permanent Non-pensionable Establishment.

Mr. F. M. PURVES called and examined.

71,670. (Chairman.) The witness said although it had been impossible for him to consult all his colleagues in India, the written statement comprehensively embraced all the points which Temporary Engineers desired to bring before the Commission. The proposals which he had made might not be acceptable to all Temporary Engineers, but they would be acceptable to the majority. They certainly met with the assent of Temporary Engineers in Upper India.

71,671. There were about 253 Temporary Engineers in the various branches of the Public Works Department. There were 75 employed on railways, about 150 employed in the Irrigation Department, and the remainder were employed on Roads and Buildings.

71,672. With regard to length of service, the witness knew of one Temporary Engineer who had served 23 years. Taking the whole of India he should say that about 15 per cent. of the men had served over 10 years. Very few Temporary Engineers had been

All new entrants needed in the future should be employed for fixed terms, with special leave rules and should, if the requirements of the service demand, be placed at the end of their terms on the Non-pensionable List, or re-engaged on fresh terms. Men could not complain that they did not realize their exact position, till too late.

Mechanical, Electrical, Architectural, and Sanitary Engineers, who are fully qualified and specialized, should be given permanency after a term of approved service; but it lies with the Government to decide whether these men should have a separate list or be brought on to the regular Pensionable Establishment.

If the Non-pensionable List alluded to above cannot be a Permanent List, six months' notice of termination of service on either side should be the minimum; and where work has been satisfactory, a man might be transferred to another Province, without break of service, if there is work to be done. And Government might certainly make some efforts to secure men other employment when services are terminated without fault.

71,669. To sum up briefly, it is proposed—

(1) To increase the Cadre List suitably, so that all Temporary Engineers, now of over four years' service, may be placed on the Pensionable List, with the exception of those to whom it would be of no advantage.

(2) To increase sufficiently the number of Divisions, which urgently need to be reduced in size, in order that Government work might be more efficiently carried out; that Imperial men on high salaries be suitably employed; and that certain permanent men need have no just cause of complaint that their rightful ambitions are curtailed by the introduction of senior Temporary Engineers.

(3) That all Temporary Engineers not so transferred to the Pensionable List be brought on to a Non-pensionable Permanent List, being granted all the rules applicable to the regular Permanent Establishment, with salaries and increments on 10 per cent. higher scale, and with special Provident Fund, and eligibility of transfer to the Pensionable Establishment.

(4) In the event of the Non-pensionable List not being made an additional Permanent List, notice of termination of service should be extended from 1 month to 6 months; men should be transferred from one Province to another, as needed, without break of service; and, if their further services are not needed by Government, some endeavour should be made to secure men employment elsewhere.

(5) That specialised Mechanical, Electrical, Architectural, and Sanitary Engineers should be placed on the regular Permanent Establishment or have proper rules governing salaries, increments, leave, etc.

It is not pretended that the proposals set forth above would be acceptable to all Temporary Engineers, for proposals have not been received from the men of some Provinces who have not had full time. Such proposals will have to be submitted later in the form of Supplementary Memoranda. But it is believed that in a general way the proposals will meet the just expectations of the majority of Temporary Engineers in Upper India, Burma and Central Provinces.

discharged. During the last 23 years he could only recollect about five cases in the Punjab Irrigation Works. He did not think the total number could be 10 or 11. On the construction side work was continually going on, and there was no chance of any Temporary Engineers being turned out.

71,673. There were about 20 Temporary Engineers who were at present holding executive charges. Twelve Temporary Engineers were drawing over Rs. 800.

71,674. The witness would recommend increasing the permanent cadre so as to absorb all the Temporary Engineers of four years' service, besides which he would increase the number of divisions, with a view to avoiding injury to junior permanent officers. He would also re-cast the cadre for certain Provinces which had gone far ahead of other Provinces in the way of construction works because the result of not doing that in the past had resulted in men getting charge of divisions far earlier than they ought to have

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done, to the detriment both of the Government and of themselves. He advocated increasing the number of divisions, not merely for the sake of absorbing the Temporary Engineers, but because he thought from his practical experience that more divisions were required. He should say that about 10 or 12 extra permanent divisions were wanted in the Punjab.

71,675. With regard to pension, there was a rule in the Civil Service Regulations that any unbroken service of a temporary man put on to the permanent establishment counted towards pension from the date he was first employed as a Temporary Engineer. The witness thought that for certain Temporary Engineers a special non-pensionable form of service might be inaugurated. He also suggested that such officers should have 10 per cent. more than the permanent officers, and at the same time the benefit of a Provident Fund similar to the State Railway Provident Fund.

71,676. The witness thought there was good ground for the complaint that Temporary Engineers did not realise their exact position on entering the Service until it was too late. If the witness had been told at the end of his first year that he could leave, he should have gone and obtained better employment elsewhere; but he was told he would be re-engaged if he cared to stay on, and he did so, seeing there was a chance of permanent employment. After a certain number of years he became a specialist in Irrigation work, and it would have been quite impossible for him then to have left Irrigation, whatever his terms were, to find employment in any other branch of engineering. The Government had him in the hollow of their hands, and it had held him there ever since. He had been stationed on Irrigation works for 23 years, and for all practical purposes he was a permanent Executive Engineer, the only difference being in salary and pension. He stated that during his 23 years' service he had been re-engaged from year to year.

71,677. With regard to his complaint as to the recent decision under which Temporary Engineers had been brought on to the General Provident Fund, he did not think there had been a general demand on the part of Temporary Engineers to be included in that fund, because a very large number of them had not joined on the ground of insufficient salary.

71,678. (Sir Murray Hammick.) He had been in the temporary service for 25½ years, beginning work on the Bengal-Nagpur Railway, after which he went into the Irrigation Department. The witness agreed that the Government had never given him to understand that his service was anything but temporary, but he had had hopes of permanency, because Temporary men had been from time to time drafted into the pensionable establishment. With regard to the suggestion that Temporary Engineers had no better claim than a person who was in the employ of a company or private firm, and who was, under his terms of employment, liable to be discharged at a moment's notice, the witness urged that Government was really the sole employer in India. If there were a sufficient number of private firms in the country, perhaps engineers would not mind so much. They might get employment with private firms, but Irrigation was an absolute monopoly of Government. The witness stated that few young men, eager to work, looked closely into conditions of service at first, and it might have been his own fault that he did not bother much about the conditions when he first joined; but that he considered that he certainly should have been given a better salary and he doesn't bother now as the Government cannot now dismiss him.

71,679. (Mr. Abdur Rahim.) When Temporary Engineers were appointed to the permanent cadre, it was not by any means the general rule that they were appointed to the lower grade. It was one of their complaints that there was no fixed rule of any sort to govern the amount of salary payable to a Temporary Engineer.

71,680. If a man was not very useful to the Department he was at once discharged, and the terms under which Temporary Engineers were employed gave a great deal of discretion to the Government as to

which men they should keep on. Temporary Engineers are not kept on through favour or influences, but solely on their merits. In short, they are not what is known to Indians as "parvastis."

71,681. (Mr. Madge.) With regard to the three sources of recruitment set out in the written statement, the witness thought there was an objection to recruiting for the same service men whose qualifications could not be co-ordinated, but he did not desire to raise a point of that kind, because Government employed its own class of men, and if it chose to expend money in teaching those men, there was no harm done to the witness, at all events.

71,682. The witness thought there would always have to be a certain number of temporary men, but these men should be employed on special terms. He was formulating a scheme as to how the cadre might be worked with the least possible number of Temporary Engineers, and he would be pleased to send it to the Commission in due course. In the majority of cases all the appointments which the temporary Engineers held were really permanent, but partly for reasons of economy temporary men on lower salaries were employed.

71,683. The witness said he made the suggestion that both the cadre and the number of divisional charges should be increased, not only in the interests of the permanent men, but in the interests of the Service generally.

71,684. (Mr. Macdonald.) The witness had calculated that the pay of a young Temporary Engineer should be higher than that of a Permanent Engineer by 20 per cent. of which 10 per cent. would be increased salary and 10 per cent. deferred pay. He thought under such an arrangement men of as good a quality as the Permanent Engineers would be obtained. If an equivalent rate of pay was given, he agreed there was no reason why Government should not say they only wanted a certain number of permanent men, and that all the other men they required should be taken on just as though Government were an outside contractor.

71,685. The witness did not agree in the least with the statement put forward by various witnesses that the work of the Temporary Engineer taken as a whole was markedly inferior to the work of the Permanent Engineer. In his 25 years' service witness had worked alongside of Permanent and Temporary Engineers, and also had had both classes of men under him, and certainly did not see any difference in work.

71,686. Every year a certain number of men came out of the colleges who might be used as temporary men, so that if the officers in charge of work were dissatisfied with their existing temporary staff, they could discharge the men who were not giving satisfaction and take on new men. The market was always being supplied every year, and consequently if the average standard of Temporary Engineers' work was markedly lower than the average standard of Permanent Engineers' work, the responsibility rested with the superior officers, and not with the Temporary Engineers. Permanent Engineers could be lazier than Temporary Engineers, and the very conditions of the service could not make their work superior to that of temporary men.

71,687. (Mr. Fisher.) When the witness stated that Government had a monopoly of all the engineering works in India, he had not overlooked the fact that there were engineering works undertaken in the Native States, but the Local Government always employed men of their own State, the better appointments in Native States being monopolized by retired Chief Engineers, and other high officials.

71,688. It was not exactly the case that Irrigation work was so highly specialised that a man who had been a long time at it was, *ipso facto*, disqualified from undertaking engineering work of another kind, but the witness would not have the same chance of getting the same terms on a railway as a man who had been 23 years on railways.

71,689. (Mr. Sly.) It was the fact that every Temporary Engineer on joining signed a declaration that

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he clearly understood the conditions of his temporary employment and accepted them in the just hopes of better things, and that he also received every year throughout his service a notice with regard to the retention of his services, which also clearly stated that he was employed on exactly the same terms; but the witness contended that such conditions were not understood by a man when he signed them. The witness put forward no legal claim of any sort, but he thought the fact of a man being employed year after year nullified those conditions, in spite of the fact that they were brought to his notice every year, and that Temporary Engineers had a moral claim on the Government of being made permanent, when they served Government so well, year after year, and under equal conditions of service as permanent men.

71,690. He agreed that, if his services were to be retained on uncertain tenure and small prospects, his real grievance against the Government was that

(The witness withdrew).

RAI BAHADUR LALA BAIJ NATH, Executive Engineer, Punjab.

Written Statement relating to the Public Works Department.

71,693. **INTRODUCTORY.**—I appear as a Representative of the Association of Indian College Engineers, of which I am the Honorary General Secretary. Nearly 75 per cent. of the Provincial Engineers throughout India and Burma are its active members. The rest have full sympathy with its work and aims but are not actually enrolled.

(2) I passed out of the Thomason Civil Engineering College, Rurki, in 1897, the first batch of the Provincial Service from Rurki having come out in 1895. The Association was started in 1901-02 when the Provincial Service was just in its 7th year; and in accordance with para. 10 of Resolution No. 2523 G. of 1893, it was fully expected that the re-organisation of the Service would be reconsidered and the Provincial Service abolished. Memorials were sent up by all officers then in Service, and ever since then the Association has been strenuously but most respectfully representing, by means of Petitions and Memorials, the claims of Engineers entering the Indian Public Works Department from the Indian Colleges, to the same treatment as accorded to Imperial Engineers, and to a restoration of their position and status in the Department to what it was before the backward step of creating a Provincial Engineer Service was taken by the Government of India in 1892.

(3) The various Memorials and Petitions from the Provincial Engineers, ranging over a period of 6 years (1902 to 1907), instead of having the desired effect, resulted in the least expected Resolution No. 675-694 E., dated 24th April, 1908, which practically aimed at the complete separation of the Imperial and Provincial Engineer Services, and thereby the complete degradation of the latter. Discontent among the Engineers, recruited from the Indian Colleges since 1895, was already keen, but this Resolution made it very much keener. A large majority of the men refused to accept terms of service which departed from the original conditions on which they were induced to enter Service and which aimed at a further degradation of their status. The rest of the constitutional struggle through which the Service has passed is well known, and this Association did its level best to place the case before the authorities in the most respectful and the clearest manner possible. The Government of India Resolution No. 439-458 dated 15th May, 1912, abolished the fresh distinctions and disabilities which were attempted to be created by the 1908 Resolution.

(4) But even by this 1912 Scheme, the case was not finally settled, and on the 15th May, 1912, in reply to certain questions asked in the House of Commons, Mr. Montague, Under-Secretary of State for India, made the following statement in connection with the case of Provincial Engineer Service:—“That it was impossible to state exactly when the decision would be reached in this most difficult and complicated case. The Secretary of State in Council had already sanctioned certain increases in pay, which, he hoped, would satisfy those interested, but had found it necessary to reserve other parts of the Government of India's proposals for further considera-

tion. The matter would be expedited so far as was possible till a final decision was reached on all issues. Lord Crewe was not prepared to consider the laying of papers on the table.” The “increases in pay” referred to above are those granted in the 1912 Scheme, which merely gave what had been proposed to be withheld and taken away by the 1908 Scheme.

71,691. The engineering duties of a Revenue officer in the Irrigation Department were to look after the maintenance of his channels, and to keep them in proper condition, so that the supply of water was properly distributed. He had also to consider a large number of hydraulic engineering questions which were of the utmost importance, such as the designing of outlet and distributory heads, and he had to see that channels were kept up to certain designs, and to change designs if need be.

71,692. (Sir Theodore Morison.) The last occasion on which advertisements were issued for Temporary Engineers for the Punjab Irrigation was in 1890 or 1891. There was still a fair field of men from which Government could select; at the present rate of wages and conditions of employment, Government could obtain as many young men as it required.

(5) On the 10th October, 1912, again, in the House of Commons, the following questions were asked to which the Under Secretary of State gave the replies quoted below:—

Questions.

(1.) “Whether a final settlement had yet been arrived at in the case of the Provincial Engineers; would he state what were those parts of the Governments of India's proposals which had been reserved by the Secretary of State for further consideration, and when a decision upon them would be taken?”

(2.) “Whether it was proposed to restore, either completely or partially, to the Imperial Service, those Provincial Engineers who had received their training at Indian Engineering Colleges?”

(3.) “Whether the Secretary of State would arrange that the members to be co-opted on the Public Services Commission, to represent the Provincial Engineer Service, should be taken from those who might be duly elected for the purpose by the Provincial Engineers themselves?”

Replies to above questions.

(1.) and (2.) “As the Hon'ble Member was informed on May 15th last, orders have been passed sanctioning certain increases of pay to the Provincial Engineers. The subject reserved for future consideration is practically the one mentioned in the Hon'ble Member's second question, viz., whether any change shall be made in the system of recruitment for the Imperial Service, and if so, under what limitations and conditions, so as to allow the appointment or promotion to that Service of Engineers trained in India. This subject is covered by the terms of reference to the recently appointed Royal Commission on the Public Services in India.”

(3.) “The procedure to be followed in the matter mentioned, has not yet been settled. In any case the selection of co-opted representatives will be for settlement by the Royal Commission itself.”

(6) From the above extracts from announcements made in the House of Commons it will thus be seen that the 1912 Resolution was, quite unexpectedly, silent on the question of the restoration of Indian College Engineers to their former status. They now look for redress of this long standing and sore grievance to the Royal Commission on the Public Services in India, and this Association strongly but most respectfully urges that the discontent created by the introduction of the Provincial Engineer Service since 1892, be removed by its abolition, and the former status of the Engineers recruited in India be restored to them. With this representation the Association has submitted already 50 copies of the 2 Memoranda* in which the case is fully set forth.

* Vide Annexures I. and II.

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(7) Again, the Association knows that every Indian-recruited Engineer who has joined the Department since 1895, most keenly feels and resents the anomalous position in which he is placed, and the case therefore calls for an immediate redress being granted. The whole body of Engineers recruited in India therefore, through their Association, most respectfully beg that an *ad interim* recommendation be made by the Royal Commission in connection with the case of the Provincial Engineer Service, so that no more delay may occur in its final decision.

(8) I will not here repeat the various arguments advanced in those two Memoranda, but will confine myself to give, in brief, the conclusions arrived at by the Association, after full and mature deliberation under the various heads laid down by the Royal Commission.

71,694. (I.) **Method of Recruitment.**—The Association wishes to urge that recruitment both in India and England should be (i) by free and open competition, and (ii) half in India and half in England for the present, and as time goes on, the proportion of recruitment in India should be gradually increased. The Association also wishes to emphasize that this competition should be real and that at least 3 candidates should compete for each appointment.

71,695. (II.) **Systems of Training and Probation.**—*Training.*—The Association is of opinion that the training in England is not wholly directed to the requirements of this country, while that imparted in the Colleges in India is entirely so directed. The appointments made in England should also be by an open competitive examination in which subjects must be specially chosen and must include one Indian Language so that the training there may be directed to Indian requirements.

Probation.—There must be at least one year's probation in India for English recruits also. This is especially necessary as new recruits from England take at least 2 to 3 years to gain sufficient knowledge of Indian conditions and Languages.

71,696. (III.) **Conditions of Service, (IV.) Conditions of Salary, (V.) Conditions of Leave, and (VI.) Conditions of Pension.**—Under these heads the Association emphatically but most respectfully urges that whether an Engineer is recruited in India or in England, his emoluments and other conditions noted above should be precisely the same, and should be determined solely by the work he does and responsibilities he bears, and should have nothing to do with the place of his recruitment. “Same work, same wages” is the only equitable principle in this connection.

71,697. (VII.a) **Limitations in the employment of Non-Europeans.**—In the Public Works Department there should be no limitations based on grounds of color, caste, creed, domicile or place and source of recruitment. There should be an open door for all His Majesty's subjects through unrestricted open competitive examinations both in India and England.

71,698. (VII.b) **Working of the existing System of division of Services in the Public Works Department into Imperial and Provincial.**—The division of services in the Public Works Department into Imperial and Provincial has been a failure and has resulted in nothing but discontent and want of harmonious working and *esprit de corps* in the Department. The creation of the Provincial Engineer Service was a mistake. It is high time that this mistake is rectified and this Provincial Service abolished. The various arguments showing:—

(i) that the recommendations of the Public Services Commission of 1886-87, on which the introduction of the Provincial Engineer Service was based, are not sound;

(ii) that it was not justifiable to give effect to those recommendations.

(iii) that the policy advocated by that Commission has not been consistently followed; and

(iv) that it is now eminently desirable to abolish the Provincial Engineer Service.

are fully set forth in the Blue Statement submitted by this Association.*

* Vide Annexure II.

I particularly draw attention to the speech of Sir William Muir, Lieutenant-Governor of the United Provinces, delivered at the Convocation address at Roorkee in 1873, from which the following extract can bear repetition, and which is looked upon by Roorkee Engineers as a definite assurance and a pledge from the Government of India:—“But apart from personal associations, there is a reason which renders the present moment one of Public interest; the establishment in England of an Engineering College for India has unsettled the minds of the public here as to the prospect of this Institution and the continuance to it of the patronage of Government. It has been a subject of much anxiety to myself, and of correspondence with the Government of India. It is, therefore, with sincere satisfaction that I am able to announce to you and through you to those without, who are interested in the Thomason College, that the Institution at Coopers Hill will in no degree affect the relations of the Government of India with this College, nor the employment which has been hitherto guaranteed to its more successful students. Between the two seminaries there will be no opposition or antagonism. The requirements of this great country are ample for both. I am sure that you will all with me be thankful to the Governor-General in Council for the justice which has thus been rendered to Rurki College.”

71,699. (IX.) **Other points.**—(1) There is no analogy whatever between the case of Indian-trained Engineers and the Provincial Services of other Departments. Therefore there is also no sound argument against the abolition of the Provincial Engineer Service on the ground that this would entitle other Provincial Services to similar treatment.

(2) The Association is of opinion that the present Temporary Engineer Service is very unsatisfactory, and it is highly desirable that it should be regularized by regarding it as a permanent non-pensionable service on an incremental scale of pay.

(3) The Association understands that it is being hinted in certain quarters that the expenses of Indian Officers of pure Asiatic descent in the Department, are not so high as to warrant their being paid the same emoluments as are paid to Europeans and Anglo-Indians. This impression is altogether erroneous, and this Association, which consists of both Indian and Anglo-Indian Members, is anxious to remove it. The impression seems to have gained ground on account of want of insight into and lack of full knowledge of Indian life and customs. The channels of expenditure of an Indian may be different from those of a European, but they are as varied and numerous as those of the latter. An Indian has to support a family which, unlike that of a European, includes not only his wife and children but also a number of far and near relatives and dependants; and considering the rapid rise in prices, this causes a very heavy drain on his resources. Then he has to meet heavy expenses on the occasion of marriages and other social functions. It is not necessary to enter into the ethics of this question here but facts must be taken as they are. Besides, it must be recognised that educated Indians and especially Engineers have adopted European mode of living which is just as expensive in their case as in that of Europeans. As a matter of fact Indian Engineers have to keep in many cases, a double establishment of servants, horses, carriages, etc., on account of their social customs, which compel their families to stay generally at Head Quarters, while in matters of house rent, camp equipment, dress, etc., they are precisely in the same condition in which European Engineers are. Another point, in this connection, is that there is a great tendency for educated Indians to give their children the best education in India or abroad and this is a very heavy item of expenditure. When all is said and done, however, the principle of “same work, same pay” must be the guiding maxim in fixing emoluments, which should have nothing to do with any private or individual considerations.

(4) *Provincial Engineer Service—a young service.*—It is not out of place to point out that the Provincial Engineer Service is young and none of its members has put in more than 17 years' service nor entered administrative rank in any Province in India. It is

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hoped that the fact of the service being so young will not stand in the way of full weight being attached to its representations.

LIST OF DISTINGUISHED ENGINEERS.

(This list is as far as information has so far reached the Secretary).

(1) From Thomason Civil Engineering College, Rurki.

No.	Name.	Year of passing out.	Rank attained.
1	C. C. Anderson...	1851	Chief Engineer U.P.
2	Rai Bahadur Kanahaya Lal.	1852	Executive Engineer, Punjab.
3	E. Swetenham (Col.) ...	1853	Superintending Engineer, U.P.
4	H. Garbett ...	1854	Superintending Engineer, Punjab.
5	R. E. Forrest ...	1855	Superintending Engineer, U.P.
6	H. E. Whish (Lt.-Col.)	1856	Superintending Engineer, U.P.
7	W. D. Brockman ...	1858	Superintending Engineer, U.P.
8	H. F. White ...	1859	Superintending Engineer, Rajputana and C.I.
9	Capt. W. K. Elles ...	1860	Lt.-Genl. Bengal Command.
10	W. H. Mackesy (Lt.-Col.)	1861	Superintending Engineer, M.W.S.
11	G. D. A. Jackson (Gen.)	1863	Superintending Engineer, Military Works.
12	F. D. M. Brown, V.C. (Lt.-Col.)	1864	Principal Thomason College, Roorkee.
13	W. C. Wright ...	1864	Chief Engineer, Rampur State.
14	H. L. Monk ...	1865	Chief Engineer, Railways.
15	A. J. Wither (Lt.-Col.)	1866	Superintending Engineer, Bengal.
16	J. F. Miller (Lt.-Col.)...	1868	Superintending Engineer, Punjab.
17	C. G. Palmer, C.I.E. ...	1868	Chief Engineer, U.P.
18	R. E. Nelson ...	1869	Superintending Engineer, Burma.
19	J. S. Slater ...	1870	Principal, Civil Engineering College, Sibpur.
20	A. R. Lilley ...	1870	Superintending Engineer, Railways.
21	J. T. Rollo ...	1870	Superintending Engineer, Burma.
22	B. Baxter ...	1871	Superintending Engineer, Railways.
23	E. W. P. Foster ...	1871	Egyptian fame.
24	J. R. Bagley ...	1871	Chief Engineer, Railways.
25	Sir W. Willcocks, K.C.M.G.	1872	Egyptian fame.
26	G. M. R. Field ...	1872	Chief Engineer, Punjab.
27	Sir W. R. Garstin ...	1872	Egyptian fame.
28	Rai Bahadur, Lala Ganga Ram, C.I.E.	1873	Superintendent of Works, Delhi Coronation Darbar Works, 1903; and Superintending Engineer, Patiala State.
29	G. Humfress ...	1873	Superintending Engineer, Railways.
30	A. F. Higgins, K.I.H.	1873	Superintending Engineer, Bengal.
31	A. Grant ...	1873	Superintending Engineer, Hyderabad.
32	J. L. P. Hogan ...	1873	Chief Engineer, Railways.
33	H. T. Gwyther ...	1874	Superintending Engineer, Railways.
34	A. E. Rose ...	1874	Superintending Engineer, Burma.
35	Rai Bahadur, K. C. Bhandopadhyay.	1876	Superintending Engineer, Bengal.
36	H. D. Granville ...	1876	Superintending Engineer, Punjab.
37	W. MacDonald ...	1876	Chief Engineer, E.B. and Assam.
38	C. E. Housden ...	1876	Superintending Engineer, E.B. and Assam.
39	W. B. Gwyther ...	1876	Chief Superintending Engineer, E.B. and Assam.
40	J. T. Farrant ...	1877	Chief Superintending Engineer, E.B. and Punjab.
41	W. A. Bagley ...	1877	Superintending Engineer, Punjab.
42	E. G. Foy ...	1877	Superintending Engineer, Burma.
43	C. S. R. Palmer ...	1878	Australian fame.
44	G. T. Oliver ...	1878	Superintending Engineer, Burma.
45	W. E. T. Bennet, C.S.I.	1878	Chief Engineer, Punjab.

No.	Name.	Year of passing out.	Rank attained.
46	G. M. Harriot, C.S.I., C.I.E.	1878	Chief Engineer, C.P.
47	J. Willcocks ...	1879	Superintending Engineer, Railways.
48	C. E. V. Goument, C.S.I.	1879	Chief Engineer, U.P.
49	J. G. Davis ...	1879	Superintending Engineer, Punjab.
50	Rai Bahadur, Kanhiya Lal.	1879	Superintending Engineer, B. and R. Punjab.
51	W. P. Housden ...	1881	Superintending Engineer, U.P.
52	F. E. Gwyther ...	1881	Chief Engineer, Punjab.
53	R. E. Purves ...	1881	Chief Engineer, Punjab.
54	H. W. James ...	1881	Superintending Engineer, Burma.
55	F. W. Vyal ...	1882	Superintending Engineer, Burma.
56	G. T. Anthony ...	1882	Superintending Engineer, U.P.
57	S. Athim ...	1882	Superintending Engineer, U.P.
58	J. M. Taylor ...	1882	Superintending Engineer, U.P.
59	F. O. Oertel ...	1883	Offg. Superintending Engineer, U.P.
60	Rai Sahib, R. Mittra ...	1883	Offg. Superintending Engineer, C.P.
61	C. Pratt ...	1883	Offg. Superintending Engineer, Railways.
62	E. J. Mitchell ...	1883	Superintending Engineer, E.B. and Assam.
63	F. W. Roberts ...	1884	Superintending Engineer, Railways.
64	R. J. Powell ...	1884	Superintending Engineer, U.P.
65	E. A. W. Phillips ...	1885	Superintending Engineer, Burma.
66	A. J. Wadley ...	1885	Superintending Engineer, Punjab.
67	Anand Prasad Sarkar ...	1885	Chief Engineer Bihar and Orissa (Place of recent).
68	Rai Bahadur Ralla Ram, J.S.O.	1886	Engineer-in-Chief, Railways.
69	C. H. Wollaston ...	1886	Engineer-in-Chief, Burma.
70	F. W. Schönmamm ...	1887	Superintending Engineer, Punjab.
71	B. C. Lall ...	1887	Superintending Engineer, U.P.
72	P. N. Sen ...	1888	Superintending Engineer, Burma (place of recent).
73	F. T. Bates ...	1889	Superintending Engineer, Punjab.
74	H. W. M. Ives ...	1889	Superintending Engineer, Punjab.
75	F. W. Allum ...	1890	Superintending Engineer, Railways.
76	H. Hughes ...	1891	Superintending Engineer, Railways.
77	J. N. Taylor ...	1891	Superintending Engineer, Punjab.
78	C. J. Floyd ...	...	Superintending Engineer, Punjab.

Note 1.—Men who passed out in 1892 to 1894 have not yet reached that stage when they may get Administrative rank.

2. After 1894 the men have been classed as Provincial Engineers.

3. Some of the officers in the above list are those who were out-classed at Roorkee and did not get guaranteed appointments but were made Imperial from Temp. Engineers.

(2) From Poona College.

(Prior to 1869 this College turned out only Subordinates and the first Engineer Officer passed out in that year).

1. Mr. Fardunji Kavasji Tarapurwala, B.A., L.C.E., C.I.E., 1876, retired a few years ago as Superintending Engineer 1st Class, Bombay.

2. Mr. M. Vishvesvarayya—1884—became Superintending Engineer 1st Class before he was 50 years of age—Chief Engineer Hyderabad State, Chief Engineer Mysore—now Diwan of Mysore State, not yet 55 years of age.

3. K. B. Mancharji Kavasji Marzban, C.I.E.—Joined the Department as a subordinate before 1869; retired as an Executive Engineer 1st grade; got Khan Bahadur 1877, and C.I.E. on 30th May, 1891—

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on retirement joined the Bombay Municipal Service. Is alive, and is now 72 years old.

4. Mr. N. Belvadi—Joined 1891, became Superintending Engineer 1911, at the age of 43 only, and died in March, 1912, at 44 years.

5. Karpur Srinivasarav, B.Sc.; L.C.E., 1891, Superintending Engineer, Mysore.

6. Bangalore Kirishnarao B.A., L.C.E., 1891, Superintending Engineer, Bombay.

7. Vinayak Trimbak Agashe, L.C.E., 1892, Superintending Engineer, Bombay, and Sanitary Engineer.

GENERAL SECRETARY,
Assn. of Indian College Engineers.

ANNEXURE I. TO ABOVE.

Memorandum by the Association of Indian College Engineers relating to the Public Works Department.

71,700. (I.) Methods of Recruitment.—(1) The superior posts in the Department are recruited in 5 ways:—

(a) by the appointment of Civil Engineers obtained from England,

(b) by the appointment of Royal Engineers,

(c) by the appointment of successful candidates from the Indian Engineering Colleges,

(d) by the appointment to the permanent establishment of Temporary Engineers howsoever secured, and

(e) by the promotion of selected officers from the subordinate grades of the Public Works Department.

(2) Recruits from England are appointed by a Selection Committee at the India Office without competition. The annual recruitment from this source has varied. The number during a series of years has averaged 30 (vide the reply given to a question asked in the House of Commons on the 19th April, 1911). The annual recruitment in India is approximately 14, viz., 9 from the successful candidates of the Indian Colleges and 5 from selected subordinates.

(3) The proportion of recruits from England and from Indian Engineering Institutions, i.e., excluding promoted subordinates, is thus approximately 30 to 9. That is to say, only 20 per cent. of the total annual recruitment is obtained from the Indian Colleges and 70 per cent. from England. The remaining 10 per cent. is obtained by selection from the subordinate grades. In other words 80 per cent. of the total annual recruitment is made by selection, while only 20 per cent. is made by open competition.

(4) This proportion of recruitment from the Indian Colleges, which, be it remembered, are institutions maintained at great cost to the State, is thus very small as compared with that from England. This proportion of recruitment should be contrasted with the position existing at the time of Public Service Commission of 1886-87 and with the recommendations of that Commission. It will be noticed (vide page 362 of Appendix O of the Appendices to the Report of that body) that the annual recruitment from England and from the Indian Colleges was, at that time, in the proportion of 21 to 9, that is to say, the Indian Colleges received 30 per cent. of the total annual appointments. It is, therefore, manifest that, notwithstanding the fact that the said Commission recommended a gradual increase in the annual number of appointments to be given to the Indian Colleges by reducing the English recruitment, the reverse has in fact transpired. English recruitment has gradually increased while the recruitment from Indian Engineering Colleges has remained absolutely unchanged.

(5) It is asserted that the legitimate aspirations of the public in India cannot be satisfied unless a greater proportion of the superior appointments in the Public Works Department are reserved for competition in this country. It is suggested, as a suitable remedy, that at least 50 per cent. of the total annual recruitment be made in India at present, and that this proportion should be gradually increased as conditions change.

(6) Again, as regards the system of recruitment in England, the method of selection at present in vogue

is decidedly faulty and should be discarded for a system of open and unrestricted competition in which there should be no racial limit whatsoever. This system already prevails in India.

71,701. (II.) System of training and probation.—Training of men recruited from England.—There is no guarantee that the preliminary training obtained by these recruits is such as to meet the requirements of the Profession in India. The training should undoubtedly be specifically directed to one end, viz., the efficient performance of the duties required of an Engineer in India. This can only be secured by Competitive Examination, in which the subjects must be specially chosen and should include one Indian language. The competition must be real, that is to say, the number of appointments offered must not in any year exceed a fixed proportion of the number of competing candidates. A suitable arrangement would be that the appointments offered in any year should not exceed one-third of the number of candidates in that year. This suggestion is by no means unfair when considered with the conditions frequently prevailing in the Indian Engineering Colleges. For example, it has happened at Rurki College that 18 to 25 candidates have competed for 5 or 6 appointments. Again, at the Poona College it has frequently happened that no less than 40 or 50 candidates have competed for one single appointment.

Training of men recruited from the Indian Engineering Colleges.—The training imparted in these institutions, it is considered, is sound and fairly exhaustive. This fact has, moreover, been publicly admitted by eminent persons, such as Lord Macdonnell, and Sir J. P. Hewett, &c. Again, the training is directed wholly to the requirements in India. It is, therefore, submitted that, from the point of view of Indian requirements, the training received by Indian College Engineers is, in fact, superior to that received, on the average, by Engineers obtained from England. In addition, the Indian College recruit possesses the great and acknowledged advantage of having received his training in the country in which he has to practise his profession.

Probation.—The training received by the alumni of the Indian Engineering Colleges is further supplemented by a period of training on probation for one year in the Department which is not the case with recruits obtained from England. This probationary period in the Department in India is absolutely necessary and should be insisted upon as an indispensable condition and it should, in addition, be a probationary period in the strictest sense, involving selection and a possibility of rejection at the end of it. Any plea that this is unfair, or will deter candidates from England, by reason of the attached risk, may be met by the provision of free return passages to rejected probationers. This, except for the free passage, is exactly what prevails at the present moment in the case of recruits from the Indian Colleges.

71,702. (III.) Conditions of service.—The conditions of service of recruits appointed in England and India differ very considerably, and this is the sole cause of the great discontent which prevails among the latter class of officers throughout India. Notwithstanding the fact that both classes of officers are recruited for and required to do exactly the same work and bear the same responsibilities the position of officers recruited in England is more favourable, in many respects, as compared with that of officers recruited in India. The policy which has, in fact, prevailed since the date when effect was given to the recommendations of the Public Service Commission of 1886-87 has undoubtedly been a melancholy one, of monopoly and exclusion and consistently adverse to the interests of the Indian trained element. The position, thus created, is absolutely illogical and unjust and cannot, in view of the surrounding circumstances and the past history of the department, be supported. The facts and arguments urging the reversal of the policy now in vogue and the restoration of the alumni of the Indian Engineering Colleges to the position they formerly occupied (that is on a full equality with Engineers from England) are fully

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set forth in the annexed Memorandum,* which it is requested, may be closely studied.

71,703. (IV.) **Conditions of salary.**—The pay of the Indian recruited element is approximately two-thirds of that granted to officers recruited in England. This is utterly unfair and unsuitable. The resulting anomalies and defects are startling and are as follows:—

(i) The minimum pay of Indian trained Executive Engineers is much less than the maximum pay of Imperial Assistant Engineers;

(ii) The minimum pay of Indian trained Superintending Engineers is less than the maximum pay of Imperial Executive Engineers.

(iii) Anomalies exist in connection with local allowance as stated below.

(iv) Generally the pay granted to the Indian trained element is inadequate and is not commensurate with their work and responsibilities.

It is clear that Indian trained Engineers, under conditions now prevailing, will receive less pay than their own subordinates. This position is untenable. It is contended that emoluments should depend solely on services rendered, and that this distinction between two classes of officers who do the same work and bear the same responsibilities should be obliterated.

Local Allowances.—Similarly, Indian trained Engineers receive two-thirds the local allowances granted to officers obtained from England. This difference is unjust, for the said allowances are always given for a specific purpose, that is, as compensation for local disabilities which equally affect both classes of officers.

Probationary Period.—Not only have Indian trained Officers, as already explained, to undergo a probationary period and incur the consequent risk of rejection, but even after completing such probation, the period so spent is not counted for increments and promotion. This causes great inequality between the two classes of officers.

It is contended that there should be absolutely no distinction in the matter of emoluments, of whatever nature, between the two classes of officers.

71,704. (V.) **Conditions of leave.**—Here again there is much disparity between the conditions applying to each of these two classes of officers. Great stress has been laid on the advantage to be derived by an Engineer in visiting works in foreign countries and the element recruited in England has received undue credit on this account. Unless the conditions of leave are the same, it becomes impossible for Indian trained men, even if they desire to do so, to secure the same advantages in this direction as English recruited Engineers. Again, the nature of an officer's duties in the Public Works Department involves continued exposure and discomfort for long periods and the health of an Indian trained officer suffers equally with that of imported men. There is, therefore, no reason whatever to perpetuate the present distinction. Indian College Engineers should, therefore, receive exactly the same leave conditions as their contemporaries recruited from England. It is generally recognised that Indian recruited Engineers break down in health, much earlier than men obtained from England, and this is due to insufficient leave. Again, officers recruited in India in certain other services, e.g., the Traffic, Accounts, Opium, Finance, etc., are under more favourable leave rules, and there is no reason why Indian trained Engineers should not be on an equal footing with these other services.

71,705. (VI.) **Conditions of pension.**—Here again there is a much resented distinction, vide art. 636, Civil Service Regulations, which will create invidious and unjust anomalies. For example, an Indian trained Chief Engineer will draw less pension than his own subordinates recruited in England. It is submitted that it is a well and universally established principle, that pensions are granted as retiring provisions for specific services rendered to the State, and it is therefore illogical and unjust to create or maintain any distinction in this direction between persons who have in fact rendered exactly the same services. In other words, pensions ought to be wholly and solely dependent on specific services rendered and

not on place of original recruitment, for this does not involve any special merit.

71,706. (VIIa.) **Limitations in the employment of Non-Europeans.**—As urged above the Department should be recruited half from England and half in India for the present. The recruitment in England should be open to all British subjects equally, irrespective of domicile, colour, caste or creed. Latterly, during the existence of Cooper's Hill College, only 2 Indians were eligible for appointment even after competition, and at present the number of Indians eligible for appointment in England is limited to 10 per cent. of the total annual recruitment. Limitations of this nature should be barred.

71,707. (VIIb.) **Working of the existing system of division of services in the Public Works Department into Imperial and Provincial.**—The division of the Public Works Department into Imperial and Provincial sections has been anything but a success, and can never be so in view of the surrounding circumstances and the past history of the Department. The distinction created between the two classes of officers, who do exactly the same work and bear exactly the same responsibilities, is intensely resented and will inevitably result in splitting up the whole Public Works Department into two hostile camps, and this must greatly injure efficiency. The interests of the two classes of officers are now widely divergent, and this is conspicuous in their relations. Concerted action has become impossible and the general feeling of *esprit de corps* which formerly prevailed, has ceased to exist. In its place there will assuredly spring up a deep and widespread feeling of suspicion and distrust between the two classes of officers which must wreck harmonious working. So long as the two classes possess, on the average, equal educational and professional attainments, and this is undoubtedly the case, any differentiation between them is unworkable. It is impossible to force a distinction in pay when none exists in attainments, and any attempts to do so must create complications and raise issues which it would be as well to avoid. Again, it is, in fact, true that many Indian trained Engineers possess superior qualifications to some officers recruited in England. It is therefore urged that, the said differentiation, which is illogical and unjust, should be obliterated and extinguished, and that the alumni of the Indian Engineering Colleges should be restored to the position they formerly occupied, that is to say, there should be only one service in the Public Works Department.

71,708. (IX.) **Other points.**—(1) *No analogy with other Provincial Services.*—It is widely felt that the resistance offered to the oft-repeated prayer of the alumni of the Indian Engineering Colleges to be restored to the position they formerly occupied, that is, on an equality with recruits from England, is due in a great measure to the apprehension that if this is accepted, other Provincial Services will be entitled to similar treatment. It is submitted in reply, that the question of other Provincial Services is foreign to the point at issue. There is no parallel between the case of Engineers recruited in India and other Provincial Services. Engineers recruited in India are not situated in the same relation to Engineers recruited from England, as members of other Provincial Services bear to the Imperial Officers of their Services. But, on the contrary, except as regards pay, leave and pension, there is in all other respects no distinction between the two classes of officers in the Public Works Department. It is, therefore, submitted that any argument, opposing the restoration of the alumni of Indian Engineering Colleges to the position they formerly occupied on the ground that this would entitle other Provincial Services to similar treatment, is unsound and cannot be raised.

(2) *Temporary Engineers.*—The position occupied by these officers in the Department is undoubtedly most unsatisfactory and requires consideration. These officers are at present recruited in an irregular manner, viz.:—

(a) From Indian trained and duly qualified Engineers who failed to secure guaranteed appointments when competing for them.

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(b). From Engineers appointed under covenant in England.

(c). From unqualified persons appointed in India.

It is submitted that, except in special cases where experts are required, these officers should be recruited from qualified persons who have successfully undergone the prescribed training in any Indian Engineering College and that no other person should be engaged until this source of supply is exhausted. It is contended that this arrangement will be greatly beneficial to the State Colleges in India and will tend to attract suitable candidates. The present conditions under which these officers serve are not such as to secure efficiency. There is practically no security whatever, for these officers are liable to be discharged with very limited notice regardless of the length of their service. It is suggested that such service should be regarded as permanent non-pensionable service, and there should be an incremental scale of pay. The Service may be called the Extra Engineer Service, and may be divided into Extra Assistant and Extra Executive Engineer classes.

Annexure II. to above.

Memorandum by the Indian College Engineers relating to the Provincial Engineer Service.

71,709. (1) The question of the recruitment of the Engineer Establishment of the Public Works Department is one that has given rise to widespread and lasting discontent. It is generally felt throughout the country that the policy of excluding the Alumni of the Indian Engineering Colleges from the Imperial Service (in which they were formerly included) is unjust and should be abandoned.

(2) The following points which deal with this question, deserve consideration, for they reveal that the situation has not, in fact, been adequately appreciated.

ORIGIN OF THE PROVINCIAL ENGINEER SERVICE.

(3) Prior to the institution of the Provincial Engineer Service by the Government of India Resolution No. 2112-G., dated the 19th July 1892, recruits from the Indian Engineering Colleges (one of which, viz., that at Rurki was established so long ago as 1847), were appointed to the Imperial Service, i.e., on an equal footing with Engineers obtained from England. It has been repeatedly proclaimed (vide the Government of India, Resolution No. 2112-G. (mentioned above) and No. 675-694-E., dated the 24th April 1908, &c.) that the Provincial Engineer Service was the outcome of the recommendation of the Public Service Commission of 1886-1887. The issues which naturally present themselves are—

(i) Were these recommendations sound in themselves?

(ii) Was it justifiable to give effect to them?

(iii) Has the policy advocated by the Commission been consistently followed.

The following considerations show that the answer to each of these questions is in the negative and that therefore the institution and retention of the Provincial Engineer Service stands self-condemned.

PUBLIC SERVICE COMMISSION OF 1886-1887.

(4) The report of that body states that its recommendations were based on two grounds, viz.:—

(i) that the considerations which led it to recommend the formation of Imperial and Provincial Services, in respect to the various branches of the Civil Service, with distinct conditions of service applied with equal force to the Engineer Establishment of the Public Works Department, and

(ii) that Engineers recruited from England received a better professional training than that which the Indian Colleges were capable of affording.

(5) *Ground No. 1.*—Here the Commission were distinctly in error because there was absolutely no analogy (and this fact has been admitted) between the case of the various branches of the Civil Service and that of the Engineer Establishment of the Public Works Department.

The following statement contrasts the facts of the case of the various former branches of Civil Service

recruited in India with those of the case of Indian trained Engineers:—

Case of the various branches of the Civil Service.	Case of Indian trained Engineers.
(i) There had always been a complete distinction between the various branches of the Civil Service recruited in England and India.	This was not the case with the Engineer Establishment of the Public Works Department, Engineers recruited in England and India were on precisely the same footing.
(ii) The Branches of the Civil Service recruited in India (now included in the Provincial Service) were formerly subordinate services and were not recruited for and required to do the same work and bear the same responsibilities as their English contemporaries.	Engineers recruited in India belonged to a superior service. They were and are still recruited for and required to do the same work and bear the same responsibilities as their English contemporaries.
(iii) The Commission recognised that the branches of the Civil Service recruited in India were recruited in an irregular manner which was not conducive to efficiency. The Provincial Service was designed to regularise recruitment and did in fact considerably raise the status and improve the prospects of these services.	Indian trained Engineers were recruited from specially established institutions of long standing, one of which had been in existence for 40 years. Many of them had attained high administrative appointments. The Provincial Service was in the case of these Indian Engineering Colleges a retrograde measure, and greatly lowered the status and prospects offered to their successful students.

Furthermore it was virtually admitted by the Government when actually giving effect to the Commission's recommendations that there was no analogy between the case of Indian trained Engineers and those other services recruited in India, for the Provincial Engineer service, as instituted, was quite dissimilar to other Provincial Services. In short, except as regards pay, leave and pension, there was in all other respects no distinction between Engineers recruited in England and India respectively (vide Resolution No. 2112-G. dated the 19th July, 1892).

(6) *Ground No. II.*—This conclusion obviously could only have been arrived at from the evidence before the Commission which, be it mentioned, was not tested by cross-examination of the witnesses produced. A close scrutiny of the evidence will reveal—

(i) that it did not establish the inferiority of Indian trained Engineers, for many witnesses, including officers with the widest experience were of opinion that there was little to choose between the best Rurki Engineer and his English rival, and

(ii) that much of it was prejudiced for, speaking generally, the excellent records established by many Indian trained Engineers in the past were forgotten, the fact that natives of India had only recently begun to appreciate and practice engineering as a profession was not considered, and the fact that many Indian College Engineers were at that time holding high administrative appointments secured by competition with their English contemporaries was completely ignored.

* See Annexure II.

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(7) Even admitting, for the moment, that the evidence tended to prove that the Indian Engineering Institutions (which had done well enough in the past) had fallen short of the requirements of the day, the proper remedy lay in raising the standard of professional education imparted in them and not, as advocated, in making a differentiation between recruits from them and Engineers obtained from England.

(8) Again it is a very significant fact that the Commission did not advocate the creation of any such distinction in the cases of the remaining superior services (e.g., the Accounts, Traffic, Entrance, etc.) which were also partially recruited in India, but in which recruitment was by nomination and not by competition open to all.

(9) It is contended, therefore, that the Commission failed to appreciate the true position in connection with the Engineer Establishment of the Public Works Department recruited in India and that their recommendations which suggested an awkward and glaringly unjust method of remedying an alleged evil (viz., the inferiority of Indian trained Engineers) were wholly unsound.

(10) To pass on to the second issue, viz., whether it was justifiable to give effect to the Commission's recommendations. The answer is most emphatically in the negative for two reasons.

(11) *Reason (i) The Government of India Act of 1833 and the Queen's Proclamation of 1858.*—By clause 87 of the said Act it is provided that "no person by reason of his birth, creed or colour shall be disqualified from holding any office in our service." In the despatch of the Board of Directors of the Honourable East India Company which accompanied the Act, it was stated—"It is fitting that this important enactment should be understood in order that its full spirit and intention may be transfused through our whole system of administration. You will observe that its object is not to ascertain qualification but to remove disqualification.....Fitness is henceforth to be the criterion of eligibility." Again the Queen's Proclamation, which is widely known and which it is therefore unnecessary to quote, was couched in very similar terms. The above statute and proclamation have been widely regarded as a charter removing all bars to any branch of the Public Service and holding out the promise of increased and higher employment of natives of India (which term includes Statutory natives) and the complaint that this promise has not been fulfilled has been widespread and uninterrupted.

When the case of the Indian Engineering Colleges is examined, however, the position becomes worse, because here, by the creation of the Provincial Engineer Service, the public in India entering these institutions were in fact dispossessed of that which they had had for nearly half a century. Whatever may be the construction put on this said Act of 1833 and the Royal Proclamation as to the grant of facilities for admission to the Public Service not already enjoyed it is contended that these pronouncements at any rate barred the institution of the Provincial Engineer Service and the withdrawal from the alumni of Indian Colleges of that which they had possessed for a long period of time, viz., full equality with their contemporaries from England. The introduction of the Provincial Engineer Service reversed the practice of years, thereby disturbing vested rights which had accrued to the public in India, and suddenly established a system by which place of recruitment alone is the criterion of eligibility for the Imperial Branch of the Public Works Department.

It may be argued that the Indian Engineering Colleges were disqualified from receiving appointments in the Imperial Service by reason of the finding of the Public Service Commission that recruits trained in them were inferior to Engineers obtained from England. In reply it is contended that—

(a) the findings of the Commission, as argued in paragraph 6 above, cannot be upheld;

(b) the Government of India have virtually acknowledged that Indian trained Engineers are qualified for the Imperial Service (vide the arguments connected with the case of Temporary Engineers, paragraph 13 below). If out-classed people from Rurki College, who in addition were only eligible for the Provincial

Service, are held to be fitted for the Imperial Service, the pick of the Indian Colleges cannot be defeated;

(c) even admitting its existence this disqualification based upon the findings of the Public Service Commission was capable of being removed and should have been immediately removed; and

(d) in any case it has since been removed, vide the public admissions of eminent persons quoted in paragraph 23 (b) below. The Indian Engineering Institutions should therefore be restored to the position they occupied before.

(12) *Reason (ii) Pledge given to Indian Colleges in 1873.*—Again the institution of the Provincial Service for Indian College Engineers was in direct opposition to a definite pledge given to them in a speech delivered by Sir William Muir, Lieutenant-Governor of North-Western Provinces at Rurki on the 28th November 1873, of which the following is an extract—".....

But apart from personal associations, there is a reason which renders the present moment one of public interest; the establishment in England of an Engineering College for India has unsettled the minds of the public here as to the prospects of this Institution and the continuance to it of the patronage of Government. It has been a subject of much anxiety to myself and of correspondence with the Government of India. It is, therefore, with sincere satisfaction that I am able to announce to you and through you to those without who are interested in the Thomason College, that the Institution at Cooper's Hill will in no degree affect the relations of the Government of India with this College, nor the employment which has been hitherto guaranteed to its more successful students. Between the two seminaries there will be no opposition or antagonism. The requirements of this great country are ample, for both. I am sure that you will all, with me, be thankful to the Governor-General in Council for the justice which has thus been rendered to Rurki College." The pledge was given shortly after the institution of Cooper's Hill College at a time when the public in India were naturally apprehensive that the position of the Alumni of the Indian Engineering Colleges in the Public Works Department would be injuriously affected, and it will be observed that it was given with the full authority of the Government of India and possibly also of the Secretary of State. It will further be noticed that the Government pledged that the Institution of Cooper's Hill would in no degree affect its relations with Rurki College, nor the appointments "hitherto guaranteed" to its successful students. The appointments "hitherto guaranteed" were in the Imperial Service. Yet notwithstanding this pledge the Provincial Engineer Service making a great distinction between Engineers recruited in England and India was introduced 20 years later and was based to a great extent on a comparison of the respective merits of Cooper's Hill and Indian trained Engineers. Again, it must be noted that this pledge which is recorded in the Rurki College Calendar of 1872-73 formed one of the strongest inducements to candidates to enter Rurki College, for these men naturally believed (and it was a legitimate belief for them to nourish) that the distinction created was merely a tentative measure, and that when the organization of the Engineer establishment came to be reconsidered, in accordance to para. 10 of the Resolution No. 2523-G. of 1893, the said distinction would be abolished.

(13) *Case of certain Temporary Engineers.*—It now remains to examine whether the recommendations of the Commission have been consistently followed, and whether the subsequent actions of the Government indicate an unqualified approval and acceptance of those recommendations. Here again the answer is emphatically in the negative. The arguments in this connection refer to the case of 12 Temporary Engineers, all Rurki men, who, many years after the Provincial Engineer Service had been established by the Resolution No. 2112-G. of 1892, were made permanent and placed not in the Provincial but in the Imperial Service. The question is why?

The deep significance of this will be more readily and forcibly recognised when the following facts are digested:—

(i) These officers had, with one single exception, passed out of Rurki College after the Commission had

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discovered that this Institution did not afford a training equal to that obtained in England.

(ii) They had failed to secure guaranteed appointments when competing for them and had consequently no claim (except good service rendered, which applies equally to other Indian trained Engineers) to this special treatment.

(iii) The majority of them had failed to secure the necessary percentage of marks (viz., 66 per cent.) required in order to qualify for Government appointment appointments and were therefore not eligible under the rules of the Institution which trained them, for permanent appointments at all. That is to say they could not, with the percentage of marks obtained by them, have obtained guaranteed appointments even if they had in fact headed the examination lists in their respective years.

(iv) Three of these officers, viz., Messrs. W. C. Cooper, C. H. A. Muller and E. S. Christie were specially barred from being appointed to the Imperial Service under para. 11 of the Resolution No. 2112-G. of 1892, because they were actually undergoing training in Rurki College on the date of the said Resolution and failed to secure guaranteed appointments allotted by Resolution No. 1443-G. of 1884. In their case therefore the Provincial Engineer Service took effect from the 19th July 1892. That is to say even ignoring the disqualification stated in (iii) above they were only eligible for the Provincial Service.

(v) In one case (the name can be stated if required) the officer failed to qualify absolutely in Rurki College and took up an appointment in the service of the State as a Temporary Sub-overseer on the R.M. Railway. He was subsequently engaged in a subordinate capacity as a Temporary Sub-engineer in the Panjab and later appointed as a Temporary Engineer, from whence he was translated to the Imperial Engineer Service. This is therefore a case where an unqualified person has risen from the lowest rung of the ladder to the Imperial Service, long after the Provincial Engineer Service was established, and this should be contrasted with the treatment accorded to the pick of the Indian Colleges against whom the door to similar advancement is absolutely banged and barred.

(14) It is irresistibly clear that—

(i) the placing of these officers in the Imperial Service was a distinct departure from the policy advocated by the Public Service Commission and in fact amounts to a reversal of that policy;

(ii) it stands revealed that the Government have virtually admitted, that Engineers trained in India even subsequent to the Commission's findings, are not necessarily inferior to men recruited in England, and that they are fully qualified to be placed on an equality with the latter, i.e., in the Imperial Service. If this applies to men who were out-classed in Rurki College it must likewise apply with greater force to others who, as stated above, are the pick of the Indian Colleges, but who are placed in the Provincial Service;

(iii) the action taken in respect to the three officers mentioned above whose appointment to the Imperial Service was barred by virtue of Resolution No. 2112-G. of 1892 must be held to have been due to an authorised relaxation of the rules laid down in the said Resolution, and constitutes in fact an amendment of the said rules and renders other Indian trained Engineers also eligible for the Imperial Service, and it is further contended that justice and equity demand that these latter should be similarly treated.

(15) *Other Superior Services, e.g., the Accounts, Finance, Traffic and Police (until recently).* The facts in connection with these Services are specially worthy of attention for they serve both to emphasise the injustice of the Provincial Engineer Service and to dispel the erroneous belief "that it is the general rule that members of the Public Service recruited in India are on a different footing as regards pay, leave and pension rules to officers obtained from England." This, be it noted, was the reason, given by the Secretary of State, for not re-opening the Imperial Service to Indian trained Engineers in the House of Commons in reply to a question asked by Mr. T. Hart Davies in May 1908, enquiring whether the subject of re-opening the Imperial Service to Indian College Engineers would be considered. The services are, like the Public Works Department, partially re-

cruited in India, but such Indian recruits are on a full equality with their English contemporaries and secure vastly better terms of service than those granted to the alumni of the Indian Engineering Institutions. The questions which immediately present themselves are (a) why were not Provincial Branches introduced for these services also?; and (b) why was the Indian recruited element of the Public Works Department alone singled out for degradations?

It is a fact that of all the Branches of the Public Service in which the Indian recruited and Imported elements were on an equal footing the Public Works Department only was disturbed and split up into Imperial and Provincial Services. It is contended that the introduction of this invidious and unjust distinction between British subjects born, domiciled, educated and recruited in India is indefensible. Further, in view of the fact that Indian trained Engineers win their appointments by free and open competition and not by nomination (which is frequently secured by influence) and that they can claim to possess superior educational qualifications to those required of men entering these other services, this state of affairs is significant and startling. For example, the educational test required for admission into the Accounts and Traffic Departments is on a par with that required merely to enter the Indian Engineering Colleges, while the Engineer has a further Superior, General and Professional educational course of 3 to 4 years in College itself, and also a further professional training of one year after completing his College course.

It is manifest therefore—

(a) that the above facts reveal that it is not the general rule that members of the Public Services recruited in India are on a different footing to officers of their services obtained from England, but

(b) that on the contrary where officers recruited in both countries are recruited for and required to do the same work and have the same responsibilities, as in the case of the above-mentioned services, it is the general rule that they are on the same footing, and

(c) that of all the Branches of the Public Service in which Indian trained and English recruits were formerly on the same footing, the position of the Alumni of the Indian Engineering Colleges has alone been disturbed.

It is therefore contended—

(i) that the ground, stated in reply to the question asked in the House of Commons, for not re-opening the Imperial Service to Indian College Engineers disappears; and

(ii) that they should in consequence be restored to their former position.

POSITION OF INDIAN COLLEGE ENGINEERS CONTRASTED WITH THAT OF ENGINEERS FROM ENGLAND.

Position prior to 1908.

(16) The above arguments deal with the policy involved in the creation of the Provincial Engineer Service. It now remains to examine the conditions imposed upon the public seeking admission to the Public Service through the Indian Engineering Colleges and to contrast them with those offered to Engineers obtained from England. Although both these classes were and are still recruited for and required to do the same work and bear the same responsibilities, the position occupied by the Alumni of Indian Colleges prior to 1908 was as follows:—

(i) The Indian College Engineer received in 30 years Rs. 116,530 (amounting at 4 per cent. compound interest to Rs. 176,800) less pay than his Imperial contemporary.

(ii) The pay of the Provincial Executive Engineer, 3rd grade, in charge of a Division was actually much less than that granted to an Imperial Assistant Engineer, 1st grade, in charge of a Sub-division involving inferior work and far less responsibility. As a result, instances frequently occurred in which Provincial Engineers received less pay than their own subordinates.

(iii) The position of Provincial Engineers on their attaining the administrative rank of Superintending Engineer was still more glaring. Promotions to these

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appointments are, under rule, made by special selection only, so that a Provincial Engineer so promoted would necessarily be selected in preference to other Executive Engineers whether Imperial or Provincial. Under the scale of pay fixed, a Provincial Engineer on receiving such promotion would not only have received approximately Rs. 67,000 less pay during his former service than other Imperial officers who by the very fact of his selection were confessedly inferior to him but he would even then *qua*-Superintending Engineer receive just half the pay of an Imperial officer holding the same appointment and also less than Imperial officers whom he had superseded and who would be his immediate subordinates.

(iv) In the matter of special allowances, which are given solely on account of extra expense involved in living in some localities, Provincial Engineers were and are still granted only two-thirds of the sum allowed to Imperial officers.

In certain cases moreover (*vide* Appendix 19, P.W. Code) the allowances granted to Provincial officers from Superintending Engineer downwards are less than those granted to Sub-Engineers (subordinates). These glaring and unjust anomalies speak for themselves. They handicapped the Indian College recruit in every possible way.

(17) A general memorial setting forth these grievances and praying for the restoration of the Alumni of Indian Engineering Colleges to the Imperial Service was accordingly submitted to the Viceroy in 1902, that is, when the Provincial Service had been in force 7 years and when the consideration of the organisation of the Engineer Establishment of the Public Works Department was due in accordance with para. 10 of the Resolution No. 2523 G., dated the 25th September, 1893. The reply given was a direct refusal on the ground that the memorialists accepted employment well knowing "the terms of service." This reply may here be suitably contrasted with the attitude displayed towards the imported elements of the Public Works Department who have met with no resistance in their demands to secure accelerated promotion and increased rate of pay which, be it known, is very greatly in excess of that which they contracted to receive and who are at the present moment clamouring for largely improved pensions to which they are distinctly not entitled under "the terms of their service."

(18) The matter was then appealed to the Secretary of State by means of a general memorial submitted in December, 1906.

Changes of 1908.

(19) The next thing that transpired was the memorable reorganization scheme of 1908 (*vide* Resolution No. 675-694 E., dated 24th April, 1908) which made the position of the Alumni of the Indian Colleges worse. Indian College Engineers were also then informed that the orders of the Secretary of State on their memorial of 1906 were embodied in the said reorganization scheme. It would be no exaggeration to say that the feeling raised by this retrograde measure was one of utter consternation and despair which deepened into bitter and intense resentment on the issue, shortly after, of the Government of India's letter No. 997 E., dated the 6th June, 1908, laying down the treatment to be accorded to Indian College Engineers who declined to accept the new conditions of service.

Briefly the changes introduced in 1908 were—

(i) Provincial Engineers were removed from the same list as Imperial officers, thus making a complete differentiation between the two classes.

(ii) The promotion of Imperial officers was accelerated while that of Provincial Engineers was retarded by several years, thus creating the position by which Indian College men would, through no fault of their own and wholly irrespective of the true relative merits be compelled to serve under Imperial men who were their juniors and who may have been previously their own subordinates.

(iii) Promotion to the administrative grades, *i.e.*, to Superintending Engineers and upwards was made almost physically impossible for Indian College Engineers.

(iv) The whole reorganisation was transparently designed to subordinate the Indian recruited element of the Public Works Department to the element obtained from England and to place the former in exactly the same relation to the latter as members of other Provincial services bear to the Imperial Officers of their services.

(v) As compensation for these changes which shattered their position and prospects and ensured the complete domination of the imported staff in the Public Works Department a slight increase of pay was offered to Indian College Engineers. This increase when contrasted with the substantial increase granted to Imperial officers is striking. For example, (i) In the first 8 years of service the increase granted to Provincial Engineers averaged Rs. 3 per mensem while that of Imperial officers averaged Rs. 88 per mensem, and (ii) In the first 15 years of service the average increase for Provincial Engineers was Rs. 29 per mensem while that of Imperial Engineers averaged Rs. 142 per mensem. And this notwithstanding the fact (the point requires and will bear repetition) that both classes of officers are recruited for and required to do the same work and bear the same responsibilities.

(20) It is small wonder that this reorganisation scheme was rejected by the vast majority of Indian College Engineers, but they were destined to receive an even greater and more staggering blow, for it was ruled (*vide* the Government of India's letter No. 997 E., dated the 6th June, 1908, cited above) that—

(i) These officers would receive no increase of pay; (ii) They would continue to be promoted according to the rules previously in force for Imperial and Provincial men alike and which had been abolished for the Imperial service; and

(iii) Their names would also be removed from the same list as their Imperial contemporaries.

These orders were not only unjust in that they withheld an increase of pay which had (*vide* preamble to Resolution No. 675-694 E., dated 24th April, 1908) only one month previously, been publicly admitted to be necessary for the Engineer establishment of the Public Works Department, but they were also in direct opposition to and constituted a withdrawal of the primary conditions under which these officers were induced to accept employment (*vide* Resolution No. 2112 G., and No. 2523 G., dated the 19th July and the 25th September, 1893, respectively). Under these said Resolutions Provincial Engineers entered the service on the expressed conditions—

(i) that except as regards amount of pay, leave and pension there would in all other respects be no distinction between them and Imperial officers, and

(ii) that they were to be borne on the same list and promoted side by side with Imperial Engineers.

It is submitted that this disregard of the paramount and indefeasible rights of these officers and this arbitrary imposition of changed conditions which would not have been accepted in the first instance (*i.e.*, when they entered the service) is unparalleled and constitutes a significant departure from the practice hitherto observed by which the inducements offered to men entering the public service have been regarded as permanent and enduring.

Changes of 1912.

(21) The general and sustained agitation produced by the above treatment is well known. After prolonged reconsideration the Government of India were led to the conclusion that the position taken up in 1908 was untenable and the reorganisation scheme of that year has in consequence been recently reversed, *vide* Resolution No. 439-458 E., dated 15th May, 1912. The position now is exactly as it was previous to 1908, with similar anomalies and defects, *viz.*—

(i) the minimum pay of Provincial Executive Engineers is much less than the maximum pay of Imperial Assistant Engineers;

(ii) the minimum pay of Provincial Superintending Engineers is less than the maximum pay of Imperial Executive Engineers;

(iii) the same anomalies in connection with local allowances still exist, and

(iv) generally the pay granted to the Provincial element is inadequate and is not commensurate with their work and responsibilities.

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The redress granted, however, is accepted as partial and tentative as it has been admitted in replies to questions asked in the House of Commons that the case has not been finally settled and that the question of the restoration of the Alumni of the Indian Engineering Colleges to the Imperial Service has been deferred for consideration by the Royal Commission.

RECAPITULATION.

(22) Various reasons have been advanced above which it is contended establish—

(1) that the policy advocated by the Public Service Commission of creating a Provincial Engineer Service for Indian recruits was unsound;

(2) that its adoption was barred by the Government of India Act of 1833, and the Royal Proclamation of 1858 for it, in fact, dispossessed the public in India of facilities for admission to the higher ranks of the public service on a complete equality with officers obtained from England which they had enjoyed for nearly half a century. It must also be remembered that these Engineering Colleges formed the only source in India of recruitment to the public service, on an equality with officers from England, by free competition open to all;

(3) that the inclusion of the Alumni of the Indian Engineering Colleges in the Provincial Engineer Service constituted the breach of a definite pledge and has moreover resulted in the creation of an invidious and unjustifiable distinction between British subjects domiciled, educated and recruited in India as explained in para. 15 above;

(4) that the Government themselves have repeatedly broken away from the policy advocated by the Commission as in the cases of the various Temporary Engineers (*vide* paras. 13 and 14 above);

(5) that the line of action taken in the cases of these Temporary Engineers gives other Indian College Engineers a just and an irresistible claim to like treatment;

(6) that the whole history of the Provincial Engineer Service from its very institution reveals a course of long continued injustice and shows how very little consideration has in fact been bestowed upon it; and

(7) that the only solution of the matter lies in the discontinuance of the present policy and the restoration of the Alumni of the Indian Engineering Colleges to the position they formally occupied, that is to the Imperial Service.

CONCLUSION.

(23) Finally it is urged that the policy now in vogue should be abandoned and that Indian trained Engineers should be restored to the Imperial Service on the following additional grounds:—

(a) Indian College Engineers have established brilliant records in the past and have in numerous instances held, and are still holding, the highest administrative appointments in the Indian Public Works Department with distinction. These facts have been duly admitted by no less a distinguished Indian authority than Lord Macdonnell who, in an address delivered at Rurki College on the 6th November, 1900, alluded in the highest terms to the instances in which the Alumni of this Institution has established not merely Indian but European reputations. Lord Macdonnell specially instanced the names of Sir W. Wilcocks and Sir W. Garstin of Egyptian fame who received their training at Rurki College;

(b) Whatever may have been the condition of the Indian Engineering Colleges at the time the Public Service Commission sat (and this as argued above did not justify the withdrawal from the Public in India of that which they possessed for so long a period of time) the standard of education imparted in these Institutions has since been considerably raised. Rurki College is now admitted to be equal to any similar Institution in Europe. The following is the testimony of persons whose opinions must prevail:—

(i) Lord Macdonnell in his address referred to above spoke of Rurki College in the following terms:—"This College is, I am assured by those competent to speak on the point, now in a position to impart instruction, both theoretical and practical, up to the standard of any similar Institution in Europe."

(ii) Sir J. P. Hewett, Lieutenant-Governor of the United Provinces, in a speech delivered at Rurki College on the 27th October 1909, spoke of this Institution and its Alumni in the following terms:—"Your assurance, Major Atkinson that it is the aim of yourself and your colleagues to keep the education given in the Thomason College abreast of the best technical education available in the Western World is amply vindicated by the extremely high standard of education to which the students who are trained here attain. I have had the privilege of working in close conjunction with two of the most distinguished Alumni of the College. I refer to Mr. Goument, now Chief Engineer in the Buildings and Roads Branch of these Provinces, but destined to reach a still more distinguished position in the Public Works Department. I have no hesitation in saying that these officers are excelled by none of their brethren in the department for professional skill, for initiative, or for a correct appreciation of the needs of the country. I have had opportunities of observing the same good qualities developing themselves in some of the younger men educated at this College, and I have no doubt that you and your staff will continue, in the future as in the past to turn out a constant stream of trustworthy Engineers. Your college has recently been described by the Secretary of State as an Institution with a large and illustrious history behind it and you rightly observe that if it is to maintain its *past pre-eminence*, it must keep abreast of the time and that there must be a continuous advance and constant and expensive improvement." The deep significance of this second utterance, by a Lieutenant-Governor in India, will be forcibly realised when it is remembered that it was uttered when the agitation against the changes of 1908, was at its highest and after Indian College Engineers had utilised the previous utterance of Lord Macdonnell and had held it out to the Secretary of State as conclusive proof that Indian-trained recruits were not inferior to their English contemporaries. It is irresistibly clear that Sir John Hewett would not have spoken in these unambiguous terms, thereby presenting the Alumni of the Indian Colleges with another lever upon which to work, had he not been inwardly conscious that Rurki College did in fact turn out men of marked ability.

(iii) There is yet another public admission establishing the fact that Rurki College has nothing to fear from a comparison with any similar Institution in Great Britain. The Honourable Mr. Goument, Secretary to the Government of the United Provinces in a speech at Rurki College on the 14th July 1910, stated:—"I think it may safely be said that this College is now in a position to impart an education, both theoretical and practical, up to a standard which compares very favourably with that of similar Institutions in Europe. The following extract from a note recently recorded by an *expert* in your Visitors' Book bears out this statement. 'I have visited nearly every College of importance in India, but among all of them Rurki College alone appears to me to attain to the standard of a first grade Engineering College, the organisation and equipment are admirable and the arrangements for imparting practical training in Mechanical and Civil Engineering are hardly equalled in any Institution in Great Britain'."

(c) it is claimed, therefore, and it is impossible to resist this claim that there is no difference between the professional education imparted in this Institution and that received by the average Engineer recruited in England. On the contrary, it is a fact in some cases that qualifications of Indian College Engineers are superior to those possessed by the latter, *e.g.*, where men who have only passed out of the Upper Subordinate Class at Rurki have proceeded to England and after undergoing a very meagre training for a short period in the elements of Engineering (at the Crystal Palace, for instance) have been appointed by the Secretary of State to the Imperial Service. These cases are well known both to the Government of India and to the Secretary of State;

(d) the Indian College Engineer also possesses the great and recognised advantage (on which great stress was laid when the institution of a Military Staff

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College in India was advocated) of having received his training in the country in which he has to practice his profession;

(e) that the Public Works Department is purely a professional and scientific service and has no share in the political administration of the country and that therefore the restoration of the alumni of the Indian Colleges to their former position, while gratifying the legitimate claims and aspirations of the domiciled European and Indian communities, without impairing efficiency (for the already high standard of the Indian Colleges could, if necessary, be raised still further) and giving a much needed impetus to

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71,710. (*The Chairman.*) The witness said there were 125 active members in his Association, all Provincial Engineers. They were all officers trained in Indian Colleges, and recruited to the Permanent Engineer Establishment of the Public Works and Railway Departments. The written statement contained a series of arguments in favour of the abolition of the present division into Imperial and Provincial Branches, and the creation of a superior service which would be recruited by open competition in England and India. It was suggested that in that Service officers should be employed under uniform conditions, as regards pay, leave and pensions, the argument being that officers at present in the two Services were employed on the same work.

71,711. The witness had had 16 years' experience in the Service, and had occupied the position of Executive Engineer in charge of important divisions since 1905. He had also served two years in Assam, the rest of his service being in the Punjab Irrigation, except for six months spent on the construction works of the Delhi Durbar of 1903. The witness's recommendation that 50 per cent. of the superior Service should be recruited in India and 50 per cent. in England for the present was put forward with the view of making the change a gradual one. At present the recruitment in India was even less than 30 per cent. and this percentage included a certain number of promoted subordinates. His colleagues believed there was sufficient material available in India to raise the percentage to 50. The witness would not retain the present system under which 10 per cent. of the vacancies filled in England were reserved to Indians, but would have free and open competition for half the posts in both countries. When he said that 50 per cent. of the superior appointments should be recruited in India, he did not mean that 50 per cent. of the recruits should be Indians, but that 50 per cent. of the appointments should go to men trained in India, Europeans being allowed to come to India and compete.

71,712. The witness's Association condemned the present system of appointing two probationers for one guaranteed appointment, and suggested that the posts should be given to the top men on the list as used to be the practice. The witness would like to see the system, under which he was apprenticed, revived, namely, that a man, if he proved himself unsatisfactory by the end of his third year of work, could be discharged. Such a proposal would give Government a free hand to deal with a very bad bargain, and it would do away with the anomaly which at present existed, that a man first on the list should be rejected in favour of the tenth man.

71,713. He did not agree with the view put forward by some witnesses that for recruitment to the Imperial Service from India it was necessary to have one very highly equipped College, and that the recruits to the Imperial Service should be drawn exclusively from Thomason College at Rurki, whilst the other Colleges should provide training for the subordinate Service only. He preferred to keep up all four Colleges, and would apportion appointments to those four Colleges in the ratio of the strength of the cadre in each Province.

71,714. In reply to a question whether economy would result from the inauguration of one Central

higher technical education to which so much attention is being rightly devoted, would in no degree imperil British supremacy; and

(f) lastly the present policy is one which needlessly and unjustly enforces a distinction between two classes which is strongly and increasingly resented, and is in fact opposed to the highest principles of liberal statesmanship which to use the words of the present Prime Minister in his memorable speech at Birmingham in September 1909, aims at "removing the domination of unjust monopoly and opening everywhere the gate to intelligence, to merit, and to energy."

College in India, the witness said that in order to provide a satisfactory and sufficient training at one Central College, a large sum of money would have to be expended on further equipment, and that that amount could be spent more advantageously in improving the other Colleges, if any improvement was required.

71,715. With regard to the witness's proposal for an open competition he would prefer to have an open competition in which graduates from all four Colleges could be tested. He would allocate a certain number of vacancies to each College in proportion to the particular requirements of the Province. He agreed that that would be a modified form of competition.

71,716. With reference to the upper subordinate Service the witness said he would place no bar in the way of the best men being promoted to the superior service. He thought there were a number of men in the upper subordinate Service who were qualified to occupy superior posts. He agreed with the view expressed by other witnesses that the personnel of the upper subordinate Service stood in need of great improvement. One thing which would bring about that improvement, he thought, would be the raising of the status and pay.

71,717. The witness said he had no objection to Royal Engineer officers entering the Irrigation Branch of the Department, but he thought they should come in at their proper place, and in the early years of their service, so as not to cause any supersessions.

71,718. The witness suggested the creation, alongside the permanent pensionable service, of a permanent non-pensionable service, to deal with the Temporary Engineer problem. He could not evolve any scheme by which the 200 odd Temporary Engineers could be done away with all at once. For all practical purposes Temporary Engineers were permanent officers. He agreed that if Temporary Engineers were employed on permanent work and given different conditions from those of officers alongside of them who were holding similar charges, it might lead to grievances after 10 or 20 years, but the present condition of the Temporary Engineers was very bad, and their position very insecure.

71,719. He did not admit that the expenses of the Indian officer were less than those of the European officer, but even if it be assumed for the sake of argument that it was so, the witness would still contend that there should be no difference in the emoluments. He refuted the argument, which was so often advanced, that because an Indian spent less he should receive less. That was not the sole ground on which the Provincial Engineers said they should receive the same salary; they sought it on the principle of the same work the same pay.

71,720. With regard to the objection in the written statement to the designation of "Provincial," the witness objected to the term because it carried with it the present rate of Provincial pay. The sole cause of the discontent among Provincial officers on that point was that they were paid less than the Imperial officers. If Government hereafter laid down a rule that there should be a foreign allowance for Europeans serving in India as distinguished from the salary of the indigenous community, and applied it to all the Services, the witness considered the discontent might be less. He thought there would still

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remain a certain amount of discontent if two men doing the same work received different emoluments.

71,721. With regard to the question, whether it would be recognised that imported labour had a different market value from indigenous labour, the witness said he thought that when imported labour was given higher wages than local labour, local labour resented it, and did not do the same willing work which it did previously. Another important point was that imported labour should have its wages compared to the labour of the particular place from which it was imported, and not to the wages of the place whereto it was imported.

71,722. (*Lord Ronaldshay.*) The witness said he had had experience of three or four England-trained men who had served under him as sub-divisional officers, and he could say from personal experience that they generally lacked in knowledge of Indian conditions. That was why he had advocated that in the open competition some Indian subjects should be introduced. He preferred a system of open competition to one of nomination or selection, as the latter might lead to favouritism and other evils.

71,723. With reference to his written statement as to the Government not being justified in creating a Provincial Service because of the Act of 1833, the witness said he meant that a Provincial Service officer was disqualified from holding the offices in the Public Works Department which he held before. A man who passed out of Rurki College went into the Imperial Engineering Service up to the year 1895. He admitted that no Provincial Service officer was theoretically disqualified from holding any office in the Public Works Department, but he considered it practically would come to that when the stage of Chief Engineer or Superintending Engineer would be reached on account of the very large difference in the pay.

71,724. (*Mr. Sly.*) The witness said that Civil Engineers recruited both from Coopers Hill and by the Secretary of State had served under him but he could not choose between the two.

71,725. (*Mr. Chabul.*) The witness said that he preferred the 50 per cent. to be recruited from England by competitive examination, as selection or nomination sometimes led to a man of inferior attainments getting into the Service and to a man of very superior attainments being rejected. He was not prepared to give any instances but he could mention the case of two Indian boys who had studied in England, one of whom had superior attainments but had been rejected, while a man of comparatively low attainments had been selected.

71,726. With reference to the scale of pay, the witness said the standard of pay for certain work was fixed and no man should be paid on a lower scale. Even if all the scientific and technical departments under Government were manned by none but Indians he would still consider the present pay to be insufficient. He did not feel justified in making any comparison between the pay of the Public Works Department and other Departments, as anything he could say on the subject would be mere surmise.

71,727. (*Mr. Fisher.*) The witness said he was aware that the Secretary of State was unable to nominate a candidate in England for the Public Works Department unless that candidate had satisfied certain preliminary intellectual tests, and those tests were comparatively high, but he did not think that was altogether sufficient to prevent a certain amount of patronage, though he did not say there was any abuse at present.

71,728. (*Mr. Macdonald.*) The witness said the real grievances of the Provincial Service were two, first pay, and secondly the proportion of recruitment in India. When the last Public Service Commission sat the ratio of recruitment in India to that of recruitment in England was 30 to 70, and the Commission recommended that statutory Natives should be encouraged to enter the Department by a reduction of recruitment in England. The reverse, however,

had taken place. The rate of recruitment for the last ten years to the Imperial Service, which was of course barred to the Indian-trained Engineer, was 40 a year, whereas only nine Engineers a year were appointed from Indian Colleges. Of late years the Department had expanded greatly and all the additional recruits had come from England. A larger recruitment in India would yield men who were quite as efficient, and he believed the Colleges in India were able to supply the men.

71,729. With reference to pay, the witness said he still maintained that a scale of pay which began at about £200 a year and might rise to £960 a year within a very reasonable period of time was not sufficient for an Engineer in the Public Works Department, because the Engineer officer had to maintain a certain official status. The witness said he had not compared the salaries with the salaries paid in England to men doing similar work and occupying the same status, but he was of opinion that the conditions were quite different in the two countries. If the wages in England for the same work were less, and it was possible to get the very best Engineers, he would still say that the need for high salaries in India was greater than the need for high salaries in England, having regard to the surrounding conditions, because the Indian Services are the best paid in the world.

71,730. (*Mr. Madge.*) With regard to the statement that many Indian trained Engineers possessed better qualifications than some officers recruited in England, the witness said he had had personal experience, but did not wish to quote instances. He had had European, Anglo-Indian, and Indian officers under him and there were not many instances he could quote, though there were some.

71,731. The witness was in favour of increasing the divisional charges not only to provide for men in the Service but also to provide for the expansion of the work. He himself had held a division for six years which he considered should have been divided into two, and he thought there was a number of similar divisions.

71,732. If any of the temporary Engineers were made permanent they could be only made so by adopting the same measures as had been previously adopted. Six or seven years ago a number of them were made permanent and placed on the list according to their relative length of service. That caused a great deal of discontent; but there seemed to be no other way. Some really deserving men had not been made permanent because of the supersessions which resulted and perhaps because the Government of India had ruled that no more men should be taken on the permanent list.

71,733. (*Mr. Abdur Rahim.*) The witness said he thought dissatisfaction began as soon as the men who first came in began to understand the conditions. At first it was more or less a case of hoping against hope. The Provincial Service began to be recruited in 1895 and the first Memorial to the Viceroy was sent up to 1902. There was a proviso in the Resolution creating the Service that after seven years the conditions would be reconsidered and the Service would be reorganised. From 1902 to 1906 no Memorial was sent up, because a reply to the 1902 Memorial was awaited, and to a Memorial of 1906 to the Secretary of State no reply was received till after the reorganisation of 1908 and then came the resultant discontent. The 1892 Resolution creating the Service said, in distinct terms, that there would be no distinction except in leave, pension, or pay. There were only 165 Provincial Engineers in the whole of India, including Railways, and he knew the opinion of practically every one of them, and could assert that they were all dissatisfied with the distinction of pay where there was no distinction in work. He himself had taken over the charge of a Division and held it for six years, former incumbents of which had nearly all risen to be Chief Engineers and one of whom was now Secretary to the Government of India.

71,734. (*Sir Valentine Chirol.*) The witness said he was not of opinion that the remuneration of work could be conditioned solely by the nature of the work

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done without considering all the circumstances and conditions under which the work was done. The principle he would apply is that the inducement offered to the recruit should be compared with the emoluments in the place from which he was recruited, and not with the emoluments obtaining in the place for which he was recruited. Paying the Indian recruited Engineer the same rate of pay in no way affected recruitment in England. The dissatisfaction was not due to the fact that Indians recruited in England were paid on the same scale as Europeans. An Indian entering the Finance Department in India received the same pay as an officer who came from Great Britain. It was impossible to expect good work from a man who was discontented with his pay and who was looked down upon by his subordinates. He had had under him an assistant getting 50 per cent. more pay than himself. He did not compare the India-recruited men with the Indian-recruited in England but with the Service as a whole.

71,735. (Sir Murray Hammick.) If the conditions in the Public Works Department were applied to other Services, the witness thought the other Services would be similarly discontented. The Services that had no distinction in pay were the Traffic Department of the Railways, which was recruited in India as well as in England, the Finance Department, the Posts and Telegraphs, and the Opium. It was true there was a distinction in pay between the Indian Civil Service, and the Provincial Civil Service, but there was also a distinction in work. A man who gained a

(The witness withdrew.)

LALA RADHIKA NARAYAN, Executive Engineer (Irrigation), Punjab.

*Written Statement relating to the Public Works Department.**

71,736. (I.) **Methods of recruitment.**—Under this head the following points deserve special consideration.

(1) The percentage of recruitment from the Indian Engineering Colleges as compared with that made in England is altogether inadequate, as appears from the following facts and considerations:—

(a) At the time of the last Public Service Commission of 1886-87, the Government of India in their Resolution No. 34 dated 4-10-86 declared the

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object of the appointment of that Commission to be "to devise a scheme which may reasonably be hoped to do full justice to the claims of Natives of India to higher and more extensive employment in the Public Service." But the actual result in case of the Public Works Department has been that the percentage of recruitment from the Indian Colleges has decreased from 30½ as it was in 1886 to less than 24½ as it is at present. This retrograde progress made during the last 27 years clearly shows that so far at least as this particular Department is concerned, the above quoted object of the Government of India was not only not fulfilled but it was actually reversed in practice.

(b) The Public Service Commission of 1886-87 in formulating their recommendations expressed an opinion that the strength of the Imperial Branch should not be greater than was necessary for purposes of control and direction, and for the execution and repair of works calling for high engineering skill; and that the recruitment from the Coopers Hill Royal Engineering College which appeared excessive at that

* Mr. Radhika Narayan represented the Engineers' Association, Lahore.

† In arriving at these percentages the number of Upper Subordinates (4 and 5 in alternate years) promoted to the Engineer's grade has not been taken into account. First because this is not recruitment but special promotion in recognition of conspicuously meritorious services rendered by selected subordinates of long standing. Secondly because as a general rule a promoted upper subordinate will rarely, if at all, aspire after rising to a grade higher than that of the Assistant Engineer. Hence this case is altogether different from that of those who are in the very first instance recruited for the Engineer grade. Thirdly because the system of promoting upper subordinates to the grade of Assistant Engineers being of recent origin had not been in vogue in 1886, and for several years after that. Therefore for a correct comparison between the existing state of things with that of 1886 it is necessary to leave them (the promoted upper subordinates) out.

listed post had been doing inferior work during his whole service and therefore when he reached the listed post he was quite glad. He thought it was an impracticable thing to pay the Indian recruited man at a different rate from the English recruited man and the difficulty would continue, unless a method could be devised whereby all men in the Department obtained what Imperial men already had, and a new Department was created at a lower scale of pay and given less important work; but he did not think that a scheme of this kind came within the limits of practical politics. Any attempt to lower the pay of the Department in future, even though guarding the rights of the men already in the Department, would tend to lower the standard of work and of efficiency. He believed the Government saved about Rs. 50,000 a month on the pay of Provincial Engineers, who if contented would probably save the Government that amount many times over by doing more willing and therefore better work. The case of the officers recruited in India was so strong that nothing except the raising of pay would remove the grievance. Any differential rate in the higher services, even if made generally applicable to all the Departments in India, would cause great dissatisfaction in the Services all over India, and such dissatisfaction would result in uneconomical work, especially in his own Department, which had the spending of large sums of money in its hand and was a large earning Department. In his own division the Revenue earned was about 15 lakhs of rupees a year.

time, should be regulated accordingly. Now the recruitment from this particular College at that time was 50 per cent. of the whole, the remaining 50 per cent. being composed as follows:—20 per cent. Royal Engineers, and 30 per cent. Indian College Engineers.

If this recommendation of the commission had been acted upon, the recruitment of Civil Engineers in England should have been to-day considerably less than 50 per cent., and that of the Indian College Engineers a good deal more than 30 per cent. Moreover the substantial reduction made in the number of the Royal Engineers transferred to the Public Works Department now-a-days, should have all gone to increase the number of the Indian College Engineers the number of Cooper's Hill men being already excessive. But what has actually happened is exactly the reverse of this. The recruitment of Civil Engineers in England has increased from 50 per cent. to more than 75 per cent., and that of the Indian College Engineers has decreased from 30 per cent. to less than 24 per cent. This means a complete subversion of the recommendation of the last Commission in this connection.

(c) The Indian Colleges of Engineering, notably the Rurki College, have during the last quarter of a century or more, made a remarkable and all round progress in improving and bringing up to date their courses of study and their method of training young students in the theory and practice of Civil Engineering. This progress has been so very marked on all sides that the Indian Colleges are now in a position to claim, in the words used in the syllabus of the Rurki College for 1913 that they were able to turn out "Civil Engineers of as high a grade as a College training can produce." In addition to this in these Colleges special attention is naturally paid to "the local conditions of India." The text books give examples with descriptions and other details of the great Engineering works in India, and the whole course of teaching and instruction is designed to make the student familiar with the characteristic features of Indian Engineering. Moreover the Engineers trained in India know and understand the people of the country with whom they have to deal and among whom they have to work much better than the foreigners. Thus it follows that the Indian College Engineers ought to be better fitted for employment in the Public Works Department of this country than those recruited in England, and therefore the percentage of their recruitment should have increased with the increase in the number of qualified Engineers out-

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turned from the Indian Engineering Colleges. But actually this has not been the case at all. The percentage of recruitment in India has practically stood where it was in 1886, during the last 27 years, although the number of qualified Engineers outturned by the Rurki College alone has increased by 150 per cent. during the same period.

(d) The Cooper's Hill College was abolished in 1907-08, and since then recruitment in England has been made by a Selection Committee from amongst the qualified Civil Engineers outturned by the various Engineering Colleges there. This selection is not based on any competitive examination, and it has been found that several Engineering students who failed to pass the examinations of the Rurki, and in one case of the Poona Engineering College, went to England and after going through a short course of study there, came out successful as Imperial Engineers duly selected by the Secretary of State's Committee of Selection. This clearly shows that the Engineers recruited in England are by no means superior to those recruited in India. Moreover the Government has not been since the abolition of the Cooper's Hill College under any obligation to necessarily recruit any particular percentage of Engineers in England. It was, therefore, naturally expected that the recruitment in India would be substantially increased after the abolition of the Cooper's Hill College. But instead of any such increase a resolution (No. 675-694 E) was issued by the Government of India on the 24th April, 1908, which rendered the prospects of the Indian College Engineers very discouraging and humiliating.

In the light of the above facts and considerations it is, I believe, not too much to say that a very retrograde policy has been followed, up to this time, in the matter of recruiting Indian College Engineers for employment in the Public Works Department of this country, and therefore it can not be too strongly urged that at the present stage the recruitment in India should be increased to 66 per cent. of the total recruitment.

(2) As regards recruitment in England, the present system of appointment by selection is by no means satisfactory. The well recognized method of selection by competition is the best yet devised by man, and there seems to be no reason why it should be abandoned in case of recruitment in England. Another reason why a competitive examination is needed in this case is that the Engineering Colleges of Great Britain can not be expected to train their students specially for Indian Engineering. Therefore the selected passed students of these Colleges are likely to prove deficient in those things which are peculiar to India, and these deficiencies can best be removed by selecting the candidates on the basis of a judicious competitive examination in the special features of Indian Engineering and one Indian language. This latter point might be considered by some to be unimportant as the deficiency pointed out above might be considered capable of removal after a short residence in India. But really this view is incorrect, being based on ignorance due to the holders of this view not being in real touch with the Indian people. In fact the deficiency pointed out above is a serious one and is likely to considerably reduce the usefulness of a young Engineer for the first few years of his service.

(3) The next point to be noted in connection with the recruitment of Engineers in England is that no more than 10 per cent. of them can according to the rule in force be Indians. This distinction, based as it is on the race, creed or colour of the candidate, is, I believe, altogether unnecessary and inadvisable. I think it is a wrong policy to accentuate race prejudices by making invidious distinctions of this or any other kind. Both in England and India the door of competition should be equally open to the Indians as well as to the Britishers. No such distinction is made for Indians in case of the Civil Service competition, what is its necessity then in case of Engineers recruited in England? If this necessity lies in the fact that none but the Statutory native of India can compete in the Indian Engineering Colleges, let this restriction also be removed at the same time. There was a time when educated Indians needed special concessions and facilities for taking up the profession of Engineering. Happily that time has long passed

away, and the educated Indians are now quite competent to hold their own in a fair competition with all comers. It is indeed in the best interests of the country that the most capable men available should be employed in its public service. If again this necessity is felt on account of an apprehension that Indians, if allowed free access through all doors would swamp the Public Works Department, the following facts and figures taken from a calendar of the Rurki College ought to remove this unfounded apprehension. In the year 1886, five students out of 9 who passed the final examination of the Civil Engineer class were Indians and three of them occupied the first three places. This shows that Indians had by this time begun to take up the Engineering profession in earnest. The Sub-Committee of the last Public Service Commission which was appointed for the Public Works Department had also arrived at this conclusion. Now during the period of nine years that elapsed between 1886 and 1895, the latter being the year in which the provincial service scheme was brought into operation in this Department, both Indians and Europeans joined the Rurki College freely. This was, therefore, a time of fair competition between the two communities, and had Indians been able to greatly outnumber Europeans, this was the period in which they ought to have done so. But in point of fact out of a total number of 101 students who passed out of the Civil Engineer class of the Rurki College during this period, only 40 were Indians and 61 Europeans. When such was the case here in India where the Indian students possessed every facility for fairly competing with their fellow European students, what reasonable apprehension could there possibly be of their swamping the Department if they were allowed to compete on equal terms with the Europeans in far off England.

(4.) As regards recruitment from Indian Colleges the points which deserve consideration are as below:—

(a) The new system of sending out two apprentices for every vacancy and selecting only one of the two after a trial of one year for filling that vacancy has been found by experience to be objectionable and unsatisfactory. This system was introduced and enforced in case of the Rurki College only a few years ago. In no other Indian Engineering College this system is in force, and the Rurki College itself had done very well without it for more than 50 years. Therefore the sooner this new system is abolished and the old one restored the better.

(b) Prior to 1896 the age limit fixed for entering the Rurki College was 22 years, and no special educational qualifications were required. But in 1896 when the period of training in the Civil Engineer class was extended from two to three years, the age limit was reduced to 21 years; and soon after this came the rule that no Indian candidates could be admitted who had not passed the B.A. examination. Now the minimum age limit for passing the Matriculation Examination of the Punjab University is fixed at 15 years, and at least four years are required after this, to pass the B.A. or B.Sc. examination. So that even if a student passed the Matriculation examination at the right time, viz., when his age was between 15 and 16, and the B.A. or B.Sc. examination four years later his age by that time would be between 19 and 20. Then he must wait another year before he could go up for the Rurki examination, because the B.A. results are not declared till after this examination is over. In this way he gets only one chance for appearing in and passing the Rurki examination. On the other hand in case of European students desirous of joining the Rurki College the only educational qualification required is the School final or the Matriculation examination of some English school. So that these students can get several chances for appearing in the Rurki entrance examination before they attain the age of 21. In this respect, therefore, the Indian students labour under a great disability; and it is very necessary that this disability which becomes a real hardship in many cases be removed. The easiest way to do so would be to lower the educational qualification from B.A. or B.Sc. to F.A. or F.Sc. examination. This was the test prior to 1899 and the undergraduate students who passed out of the

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Rurki College before this year have proved to be quite as successful and competent as the graduates who passed before or after 1898.

(c) At present the recruitment of Engineers from the four Indian Engineering Colleges is very unequal. The Rurki College which is the oldest Engineering College in India is the most favoured of all. Engineers trained in this College enjoy the lion's share in recruitment, as 5 or 6 guarantees out of a total of 9 or 10 are reserved for this College in alternate years. The remaining four being distributed among the other three Colleges. If this unequal distribution of the guaranteed appointments among the several Indian Engineering Colleges is due to the fact that the Rurki College is the most advanced and up-to-date of them all, justice requires that these other Colleges should also be brought up to the same standard of efficiency as the Rurki College. Anyhow, this circumstance which is beyond the control of the students entering these Colleges, should not be considered sufficient to deprive them of their proper share of the appointments in the public service of their country. It is therefore recommended that while increasing the percentage of recruitment from the Indian Colleges, the guaranteed posts be divided among them proportionately to their respective shares.

(5.) In addition to the two permanent services whose recruitment has been criticized and commented upon above, there is the Temporary Service which came into existence about the year 1890, and went on increasing in magnitude from year to year, so that at present its strength in India is not less than 165 men which is almost equal to the total number of Provincial Engineers. Of these 165 Temporary Engineers the largest number, 63, belongs to the Punjab, and of these no less than 57 belong to the Irrigation Branch of the Public Works Department, and of these latter no less than 34 have rendered services ranging from five to twenty years. All this clearly shows that these temporary engineers are not and have never been temporary in the proper sense of the word. In fact in actual practice they have been doing the same or similar work side by side with the permanent Engineers. They have held charges of subdivisions and divisions continuously for years, exactly in the same way as the permanent Engineers have done, and the same kind of work and responsibility has been expected from them as from the permanent Engineers. And yet we find that the modes of recruitment of the two services have been entirely different. The power of recruiting the Temporary Engineers has hitherto rested entirely with the Local Government which practically means with the Chief Engineer; and since no definite and clear rules were ever framed for the regulation of this peculiar kind of recruitment, all sorts of anomalies are to be found in it. Persons possessing engineering qualifications of various degrees and kinds, and even persons possessing no engineering qualifications at all at the time of recruitment, have found their way in the Department as Temporary Engineers. This state of things is evidently unsatisfactory. It is, therefore, recommended that either the recruitment of Temporary Engineers be stopped altogether; or if it be found impracticable to do so, it should be placed on some regular and systematic basis. The following suggestions are made in this connection:—

(a) Temporary Engineers should always be recruited from amongst the trained and qualified Engineers or students of some recognized Engineering College. As the number of qualified students coming out of an Engineering College must always be considerably in excess of the students who secure guaranteed appointments, such certificated students or qualified engineers can always be had for employment as temporary engineers. Hence there seems to be no justification at all for employing unqualified persons in this capacity. No one would ever think of employing an uncertificated man as a permanent Engineer. Why then should there be any relaxation of this essential principle in the case of Temporary Engineers, who are always required to perform the same kind of work and to bear the same responsibilities as the permanent Engineers.

(b) The Temporary Engineers should always be employed for some specific work and for some specified period of time not exceeding three years. There

seems to be no justification for doing otherwise. A temporary Engineer should not only be temporary in the matter of his pay, prospects and conditions of service, but in actual practice also. We ought to adhere much more to the spirit than to the wording of the regulations on this subject. The spirit of the articles 77, 79 and 80 of the Civil Service Regulations is distinctly against the continuous employment of temporary Engineers for indefinite periods of time, as temporary Engineers.

(c) If the Government finds it in the best interest of the Public Service not to dispense with the services of any temporary engineer after the particular period of time for which he was employed is over, he should be made permanent; and his name placed at the bottom of the list of permanent Engineers already in service, along with the new permanent Engineers recruited during the year from other sources. In fact these temporary Engineers should be recognized as one of the legitimate sources of recruitment for permanent Engineers, and a certain suitable percentage of the total recruitment should be assigned to this source. It often happens that an otherwise capable student fails to distinguish himself in his College career on account of some chance circumstance or of some minor defect or short-coming which could be easily removed or counterbalanced by experience and knowledge of the world. It is clearly very hard for such men to be barred for ever from a permanent place in the public service for such trifling and unimportant disqualifications as the above. In fact a number of temporary Engineers have been made permanent in the past, and the experiment succeeded on the whole. In addition to this, it is not just and fair that the Government should go on retaining the services of the temporary Engineers from year to year for deriving the full benefit of their experience and ability so long as it stands in need of it, and that it should turn them out at a month's notice when their services are no longer required. Such a one-sided system of dealing with this important body of public servants is not only bad for the temporary engineers but is also indirectly harmful to the best interests of the Government. Hence the necessity of making the temporary Engineers permanent, under the circumstances mentioned above.

71,737. (II.) System of training and probation.—The following points deserve special consideration under this head:—

(1) Sufficient attention is not, in my opinion, being paid at present to the training of the young engineers whether recruited in England or in India. Those recruited in England do not pass through any probationary period at all for training, after their arrival in India, although they stand in much greater need of practical training than the Indian College Engineers; while those who are recruited in India do not get such training as they ought to get during their one year's period of probation. Sometimes it happens that the young engineers are placed for training under Executive Engineers who have no inclination or time for attending to this difficult piece of work properly. At other times, the conditions under which the young engineers are placed are not the most suited for giving them a good and adequate training. Moreover no definite arrangements exist at present for enabling the probationers to get a thorough grounding in the various kinds of practical work which they would soon be required to do and look after in the proper discharge of their duties as engineers. The result of all this is that the first few years of service of an engineer are not spent as usefully as they ought to be spent, and experience which could be acquired very easily under proper guidance is afterwards gained slowly and after making many unnecessary mistakes. Moreover many erroneous ideas and conceptions about men and things are formed and perpetuated merely through ignorance and want of experience. This is naturally much more the case with the engineers recruited in England than with Indian College Engineers, because the former labour under the great disadvantage of not knowing the language and the people of this country. For remedying this unsatisfactory state of things it is suggested that the

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training of all the young Engineers (recruited from whatever source) should be placed on a regular and systematic basis, and that the period of training should be sufficiently long.

(2.) It is further suggested that so far as possible European Engineers should be placed for training under some specially selected experienced and capable Indian Executive Engineer, whilst the Indian Engineers should be placed under some similarly selected European Executive Engineer. This suggestion is quite natural. It provides for the best means of removing and rectifying the characteristic shortcomings and defects of both the Indian and European recruits and is calculated to produce the best results through a combination of the virtues and excellencies of both the races. Moreover this arrangement would be very suitable for enabling the young European engineer to learn the language and to become familiar with the people much more easily than otherwise.

(3.) Lastly too much stress can not be laid on the necessity of making the young engineer learn to sympathise with and know the people among whom he has to live and work, and to be in real touch with them. This is an essential qualification for all Government servants, and it is especially so for the engineer, who is required in the proper performance of his duties, not only to deal efficiently with the forces and materials of nature, but also to negotiate successfully with the various kinds and classes of people with whom he comes in contact. In no other civilized country of this world a public servant can be expected to administer the people under him efficiently and successfully without knowing all about their habits, manners, customs, wants and grievances &c. But here in India there is a tendency to consider this important qualification of a public servant of a minor or secondary importance. This is obviously a mistake. It is, therefore, recommended that the Executive Engineers selected for training the probationers placed under them should be such as are able to inspire the young engineers with a spirit of true and abiding sympathy with the people, and to remove from their minds such prejudices, false notions and antipathies as are generally formed by young and inexperienced engineers (especially Europeans) on the basis of mere hearsay or the garbled versions of interested parties.

(4.) It is a matter of daily experience that unless an officer takes very great care, and tries to find out the truth for himself, he is very much liable to form altogether erroneous ideas and come to very wrong conclusions in judging his subordinates and other people, and in arriving at decisions for and against them. Raw young men in particular, are especially apt to jump to hasty conclusions and to act on the impulse of the moment, and if they are allowed to go on unchecked in this wrong course, the tendency for doing such ill-considered things increases, and the habits and temper of the young Engineer are altogether spoilt. Hence it is of the very first importance that the young recruits should get from the Executive Engineer selected for their training a very sound lesson about this important matter in the very beginning of their career. The account given by Mr. Fielding Hall in his article on "Competition-wallah" in the Fortnightly Review for February, 1913, of a young Civilian and his perverted notions about the Burmans is a case in point, as it very correctly represents the state of things prevailing in the Public Works Department, Punjab. The existence of this evil is fully recognized by the Indian Engineers who are in touch with the people; but most of the European Engineers seem to be unconscious about it probably on account of their necessarily circumscribed vision and more or less one-sided view of things. In any case there can be no doubt that it is of very great importance to provide against the formation and perpetuation of wrong notions of any kind about the people in the minds of the young Engineers, and the best way of ensuring this is to give them a very correct and sound training in this important matter also during their period of probation.

(5.) Another matter in connection with which necessity for sound training in the very beginning

of an Engineer's career is essential, is the method of dealing with his subordinates and office establishment both clerical and menial. Owing to various causes and chiefly due to the general ignorance of the European Engineer of the language of the people and of many other things connected with them a certain class of subordinates has arisen who, being led by the strong attraction of greed of money and power, have taken to the ignoble vocation of systematically imposing upon and deceiving their more or less ignorant and in many cases young and inexperienced officers about a good many official matters. This class consists of a body of unscrupulous, designing and clever men who have by long practice become quite expert in their illegal trade, and it is a matter of common knowledge among the Indian people that unless the Engineer in charge of a Subdivision or Division is particularly wide awake and both capable of and willing to look into matters and to find out the truth for himself, any one who wants a grievance redressed or a request granted must needs go to members of this disreputable community and propitiate them as best he can, before he can hope to gain his object. The men of this class are thus not only a great hindrance in the way of dispensing equitable justice to all both high and low, rich and poor, strong and weak; but are also responsible for having contributed very largely towards lowering the reputation of educated Indians in the eyes of their European superiors who are in many cases unable to distinguish the grain from the chaff, and judge all educated Indians indiscriminately from their experience of a few. It is, therefore, of the utmost importance that the young Engineer should be warned against the machinations of this mischievous body of men and be practically trained to distinguish such men from others and to deal with them properly.

71,738. (III.) Conditions of service.—(1.) On the basis of the one-sided evidence of many European witnesses the last Public Service Commission of 1886-87 came to the following conclusions bearing upon the conditions of service of the Engineer establishment of the Public Works Department:—"Some of the operations of that (the Public Works) Department require the highest Engineering skill and training obtainable in England, and for the control and direction of a great Department, the annual expenditure of which is reckoned by millions, qualifications are wanted which are not at present readily attainable in this country. On the other hand much of the work falls to the Engineering establishment is such as may be and is performed efficiently by officers who have received their professional education in India... Men recruited in India, once in the Department, are paid at the rates considered necessary for men who have received a superior general and professional education in England, and these last find themselves for many years condemned to labour on works within the capacity of men of an inferior standard of education... The evidence before the commission leaves no ground for doubting that the officers recruited in England receive at Woolwich, Chatham, and Cooper's Hill a professional education of a higher kind than that which the best Indian Engineering Colleges are capable of affording, and that their general training and education are superior to any attainable in India, but it is abundantly evident that at least one of the Indian Engineering Colleges can, and does impart such a professional education as is fully adequate for the ordinary work of the Department, and that these Colleges can be made still more efficient for this purpose."

(2.) The views expressed by the Commission in the above quotations clearly show that the reason why the conditions of service and salary &c. were recommended to be different for the Indian College Engineers on the one hand, and the Engineers recruited in England on the other, was that the latter were regarded by the Commission to be decidedly superior to the former in merit and Engineering qualifications. There is no other reason given for this differentiation anywhere in the report of the Commission except of course the general one of analogy with the Provincial service of the Civil Department. This is an important point to note. Now on the basis of the recommendations made by the last Public Ser-

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vice Commission the Provincial Engineer service of 1892 was instituted and in Resolution No. 2112 C, dated 19/7/1892, of the Government of India introducing this new service for the first time it is clearly laid down that excepting conditions of pay, leave, and pension, "in all other respects there shall be no distinction between the members of this service, and those of the Imperial Service." This means that although the Government of India adopted the recommendation of the Commission regarding reduction in pay of the Provincial Engineers, who were all to be recruited in India, it took no action on the suggestion of differentiating between the work and responsibilities of the two classes of Engineers, the Imperial and the Provincial, in spite of the fact that the only reason explicitly given by the Commission for reduction in pay was this said differentiation. This was a clear anomaly and it was duly pointed out by the Provincial Engineers in the memorials which they submitted after the trial period of seven years of this new experiment was over. Since reduction made in pay was on the face of it unwarranted, the protests of the Provincial Engineers against it were naturally persistent and emphatic. To begin with little or no attention was paid to the memorials of protest for several years. Then in 1908 a clever scheme was devised seemingly at least with a view to hoodwink the Provincial Engineers. The rate of pay was increased fairly substantially but at the same time the status of the Provincial Engineers was considerably lowered, and in doing this an attempt was apparently made to introduce that differentiation in the work and responsibilities of the two classes of Engineers which was left out altogether in the reorganisation scheme of 1892. According to this new organisation scheme of 1908 which was enunciated in Resolution No. 675-694 F., dated 24/4/1908, of the Government of India the lists of the Imperial and Provincial Engineers were separated, and the conditions of service of the two services were arranged in such a way as to keep the Provincial Engineers almost always subordinate to the Imperial Engineers. However this new clever scheme did not succeed at all. By far the greater majority of the Provincial Engineers did not accept these new conditions of service in preference to the old ones in spite of the substantial increase in pay, and their protest against the Provincial service itself became much stronger than before. The agitation raised by the Provincial Engineers against the reorganisation scheme of 1908 in particular and the whole Provincial Engineer scheme in general grew stronger and stronger every day, till at last the Government of India recognized the justness of their complaints to a certain extent at least and issued a resolution No. 439-458 E., on the 15th May, 1912, according to which the increase in pay provided in the resolution of 1908 was allowed to stand and at the same time the invidious distinctions introduced in that year in the conditions of service of the Provincial Engineers were all removed, so that at present the conditions of service of both the Imperial and the Provincial Engineers are the same, but differentiation is made in the rates of pay and allowances and in the leave and pension rules. Although this partial concession to the just claims of the Provincial Engineers has been entirely in the right direction, yet since by making the conditions of service the same for both the classes of Engineers it is virtually admitted that both the Imperial and Provincial Engineers are of equal merit and qualifications, the only definite ground on the basis of which a reduction in the pay of the Provincial Engineers was recommended by the last Public Service Commission is entirely taken away, and the present differentiation in pay between the two classes of Engineers remains without any justification at all. This is an anomaly which should, in my opinion, be removed as soon as possible.

(3.) As regards the conditions of service of the Temporary Engineers, they are, in my opinion, very unsatisfactory. As explained in paragraph 71,736 (5) above most of the Temporary Engineers at present in service are, in so far as their work and responsibilities are concerned, virtually in the same position as the Permanent Engineers, but their conditions of service are altogether different. Although many of them have been in service continuously for the last five, ten, fifteen, or even more than fifteen years, yet their

appointment is sanctioned only for one year at a time. Thus their services are liable to terminate at any time when the usual yearly sanction is either not applied for or not given. Moreover their services might be dispensed with at any time at a month's notice. During the last three years the services of no less than six Indian Temporary Engineers have been dispensed with whose services extended from 8 years to 16 years, of these at least three Temporary Engineers had rendered continuous approved service and had had generally obtained good recommendations from their Engineers. These are cases of real hardship, and there seems to be no moral justification at all for treating this important body of public servants in such an arbitrary and unfair way. It is in my opinion not at all right for the Government to apply the rules which are intended solely for purely temporary service to the present body of Temporary Engineers, who are temporary only in name. Great moral injustice has already been done to a good many temporary engineers whose services have been dispensed with in the past merely on the ground that at the time of appointment they were clearly made to understand that their services were liable to be dispensed with at any time it was considered necessary or advisable to do so, without paying any regard to the length of their service or to the quality and quantity of the work done by them. It is time now that something should be done for preventing the recurrence of similar injustice in future. Since the temporary Engineers are required to do the same work and to bear the same responsibilities as the permanent Engineers, and many of them have rendered not only approved but distinctly meritorious services, there seems to be no good reason why all those who have proved themselves to be as good Engineers as the permanent men be not brought on to the permanent service. I would therefore recommend that a yearly selection be made from amongst the temporary engineers now in service for being made permanent as if this service were one of the regular sources of recruitment for the Engineers, and their position on the list should be fixed just in the same way as was done on the last two occasions when a number of temporary engineers were brought on to the permanent list. It is no doubt true that the permanent Engineers regard it as a grievance that a temporary engineer when made permanent should be placed above their heads and there can be no manner of doubt that this grievance is quite a reasonable one. But this is a case in which the Government must choose between two evils, and in my opinion the injustice done to the temporary Engineers of fairly long standing and approved service by keeping them under the existing unsatisfactory conditions of service is much greater than that done to the permanent Engineers by putting above them in the list capable and experienced temporary Engineers, who are senior to them both in service and years, when they are made permanent.

71,739. (IV.) Condition of salary.—The scale of salaries as revised in the reorganization scheme of 1908 is quite adequate and satisfactory for the Imperial Engineers, but the one provided for the Provincial service is unsatisfactory, first because it has been actually felt by the Provincial Engineers now in service that their present salaries are not commensurate with the arduousness of their duties and the magnitude of their responsibilities. Secondly because the Provincial Engineers can not but feel dissatisfied and discontented when they find that the Imperial Engineers who do exactly the same kind of work as they do were drawing one and a half times as much pay as they were doing. Same work same pay is a principle which holds good everywhere. Hence any infringement of this principle is felt keenly by the party concerned.

71,740. (V.) Conditions of leave.—Hitherto two sets of rules have been in force in the Public Works Department, the Indian service leave rules and the European service leave rules. The latter are much more favourable and liberal than the former. This differentiation has apparently been made on the understanding that Europeans stand in need of leave much more frequently and for a longer period of time

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than the Indians. But it does not appear to be a good principle to make distinctions of this kind on the basis of race or creed. Moreover the conditions have all changed now and the requirements of Indians have increased a good deal. Hence it is recommended that the leave rules should now be made the same for all the Engineers in the Public Works Department whether recruited in England or in India. It might be taken for granted that no one would care to take more leave than he actually wants either for his health or for urgent private affairs. Even at present there are people who do not avail of all the leave that is due to them. Hence a liberal provision of leave in the leave rules, for all Engineers is not likely to be in any way disadvantageous to the Government.

71,741. (VI.) Conditions of pension.—The present scale of pensions is certainly inadequate both for the Imperial and the Provincial Engineer services. It should therefore be made more liberal and should be kept the same for all Engineers whether recruited in England or in India. Similarly the other conditions of pension should be the same for all Engineers irrespective of race, creed or colour. Europeans in the Imperial service have been hitherto able to retire after rendering service for 15 years. The same rule should be made applicable to all Engineers.

71,742. (VII.) Limitations in the employment of Non-Europeans.—(1) There ought to be no limitations at all in the employment of non-Europeans (viz., Indians both pure and Statutory) in the Public Works Department. Even the last Public Service Commission of 1886-7 had recognized the principle that "all His Majesty's subjects should receive equal treatment and that 'all invidious distinctions of class or race' should be removed." Hence the real reason why this commission recommended the introduction of a Provincial Engineers Service appears to be the fact that the report of the Sub-Committee appointed to deal with the Public Works Department was distinctly unfavourable about the capacity and aptitude for higher Engineering of the Indians in particular and the Indian College Engineers in general. In this connection the following passages occur in the report of the Sub-Committee:—"The professional education received there (at Cooper's Hill) is superior to any obtainable in India, the professors being more able and more numerous, the range of study wider and the opportunity for seeing the execution of large Engineering works much greater. . . . The general education of Cooper's Hill men is superior to that of Indian students, and this, as well as their English training gives them greater aptitude for applying their professional theoretical knowledge. Against this it is allowed that for the first three or four years of service Europeans or Eurasian students from Indian Colleges possess a decided advantage over Cooper's Hill men by reason of their knowledge of Indian languages and greater familiarity with the habits of the people, and acquaintance with the resources of the country. It is also stated that they are more amenable to discipline than the younger men who come out from Cooper's Hill." As to Native Engineers, while it is allowed that there are some brilliant exceptions, it is asserted by many witnesses that they are inferior to Europeans in force of character and capacity for dealing with men, that they shrink from responsibility, and are not to be depended on in emergencies calling for presence of mind and resource, and that they are less active, physically and mentally, defects which increase as they advance in years. Their dislike to service far from their home . . . renders them less useful. The aptitude of educated natives for Mechanical Engineering and what may be called higher Engineering is said to be small, and while often very good executive officers on works requiring only the imitative faculty they fail in originality and invention."

(2) This is indeed a heavy indictment and is divided under two heads (1) Against the Indian College Engineers taken as a whole, and (2) Against the Indian Engineers. It is based on the evidence of 52 witnesses of which 21 were Indians and 41 Europeans. It appears, however, that no notice whatever was taken of what the Indian witnesses said in their evidence. They were no doubt in the

minority, but this was not their fault. There are always two sides of every question, and if we ignore one side altogether on the ground that it is represented only by a minority we can never come to a correct solution of the question. The evidence given by the Indians (mostly Engineers) before the last Public Service Commission might be summarised as below:—

(a) Although the profession of Engineering was a very good training field for the Indians and the object of their ambition, yet they could not afford to study for it, because the guaranteed appointments were so very limited, especially in the Sibpur, Poona, and Madras Colleges, and there was no demand yet for Civil Engineers outside Government Service.

(b) The establishment of the Cooper's Hill College was an altogether unnecessary burden on the finances of India and was wholly unjustifiable in view of the fact that so many Engineers turned out every year from the Indian Engineering Colleges were left unprovided for and had either to accept inferior posts or turn to other walks of life after wasting a good deal of their valuable time in the pursuit of Engineering.

(c) The Indian Engineering Colleges turned out men competent to undertake any work in this country. The courses of instruction in these colleges were sufficient for the requirements of the Department, and the training given both theoretical and practical was not inferior to that given at Cooper's Hill. So far as technical knowledge went, there was no difference between Engineers educated in India and England.

(d) Civil Engineers trained in India procured the execution of work by the influence they exercised over the labouring class, whereas those recruited in England, get the work done (equally well no doubt so far as technical knowledge went) but more by compulsion than influence. The reason why Indian Engineers sometimes do not do so well as the Europeans on larger works is that sufficient scope is not given to them.

(e) Energy in carrying out works depended on the individual. Indians could undergo greater fatigue and could knock about a good deal more than Europeans, while they showed the same energy in pushing on work. Eurasians and domiciled Europeans could not endure so much hardship as Indians.

(f) The Indians had only lately begun to appreciate the Engineering profession.

(g) The Indian Engineers were better than Europeans for checking scamping of work and fraud on the part of contractors, while in the efficiency of the work done by the two there was not much difference.

(h) The Indian Engineers can work more economically than the Europeans on account of their superior knowledge of the country, people, language, and the resources and labour capacity of the district in which they were employed.

(i) The Cooper's Hill Engineers after being in the country for 4 or 5 years looked rather inexperienced, and were put in charge of Sub-divisions too early. They were seldom found to be well-versed in vernaculars, while a good command of the vernacular language was essential for efficiency in work. They generally kept the Indians at a distance.

It is a remarkable fact that the statements of these Indian witnesses as summarised above with but slight modifications hold true even to-day, viz., after the lapse of more than a quarter of a century. On the other hand the statements made by the European witnesses before the last Commission can be easily shown to be for the most part imaginary and inaccurate at the present time at any rate. Thus it was all the more necessary that the almost unanimous evidence of the Indian witnesses about the points noted in the above summary should have been duly taken into account and recommendations by the commission modified and enlarged accordingly. Had this been done the Cooper's Hill College should have been abolished about 13 or 14 years earlier than it was, and the number of guaranteed posts for the Sibpur, Poona and Madras Colleges at least should have been substantially increased. It becomes amply clear that the feeling about these two points was very strong and

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the grounds advanced in support of the recommendations made were very sound and reasonable.

(3.) The evidence of one particular witness, Mr. J. R. Upshon, establishment clerk, Public Works Department Secretariate, Madras, which has not been summarised in the report of the Sub-Committee for the Public Works Department is of special value as appears from the following extracts:—"With exception of the one guaranteed appointment the Engineering Establishment in this presidency is entirely closed to Natives of India. So far back as 1871 the evil results of such a monopoly were noticed and a Committee formed to propose some remedial measures. . . . In their report the Committee remarked . . . 'we are satisfied that it is expedient to hold out to the Natives of the country better prospects in the Department than have as yet been open to them. We would remark that Natives . . . have within recent years successfully filled many offices of trust . . . have many advantages in ascertaining correctly the wants of the villagers, and in being able to explain to them to what extent those can be provided for by the Government under the rules in force. We think that a serious mistake has been made in the administration of the Department in not fostering the Native talent and enterprise in a profession for which old hydraulic works of the country show that the Natives of this presidency possess a remarkable degree of Native aptitude.'"

"Before the year 1872 . . . only five European passed students (out of 30 A. C. E.'s who turned out of the Madras College between 1863 and 1872) were appointed to the Department as Assistant Engineers while the Natives and Eurasians who passed earlier and better received only Overseers' posts—the lowest in the Department."

"During the same period (1863-1872) 78 Europeans were appointed to the Department as Engineers. The discouragement shown to Natives led many of them to seek employment under other Governments or to enter other walks of life."

"From the year 1863 to 1886, 78 Natives of India have qualified for the Assistant Engineer grade, and of these only six have been given appointments as Assistant Engineers. In the same period 144 Europeans . . . have been appointed to the Engineers' Establishment of the Madras Public Works Department to the nearly entire exclusion of the children of the soil."

The facts and figures given by the witness clearly showed the necessity of abolishing the Coopers Hill College and of encouraging the Indian Engineering Colleges by giving them a larger number of guaranteed posts; but no such recommendation was made by the Commission. It shows that sufficient attention was not paid, or sufficient attention was not given to evidence of the Indian and Eurasian witnesses, although their number was more than one third of the total number of witnesses examined in this connection.

(4.) If the conclusion drawn above is correct and the report of the Sub-Committee for the Public Works Department was based mainly on the evidence of the European witnesses, without giving due weight to the evidence of the other witnesses the force of the indictment made must be considerably reduced. However, even apart from this consideration it can be shown that this indictment does not at all hold true at the present time. To begin with the first part of this indictment which is directed against the Indian College Engineers as a whole, it appears that up to 1886-1887 when the Commission sat no Indian College Engineer had yet risen to the administrative grade, hence none of the witnesses could have had any experience of their capacity for such work. But since then a large number of Indian College Engineers have attained to the administrative grade, several of them have acquired a world-wide fame, and it has been generally admitted by competent authorities that Indian College Engineers were in no way inferior to those recruited in England. Even if we turn to facts and figures we find that in case of the Punjab the total number of Rurki Permanent Engineers who joined the Public Works Department up to 1895 is 79, while the corresponding number of

Engineers recruited in England including the Royal Engineers is 261. Out of the 79 Rurki Engineers 24 have risen to administrative grades and of these 24 men no less than 12 have risen to the grade of Chief Engineers. This gives a percentage of 31 for promotions to the administrative grade and of over 15 for those to the post of Chief Engineer. In case of the Engineers recruited in England, out of a total number of 261, eighty-six were promoted to the administrative grade and 39 to that of Chief Engineer, giving the corresponding percentage of less than 33 and less than 15 respectively. This comparison clearly shows that the Rurki Engineers are in no way inferior to foreigners, and the result of the comparison would have been ever better than this, if the Indian Engineers had not been kept studiously out of the administrative grade in this Province. This is I believe a complete and effective reply to the indictment against the Indian College Engineers.

(5.) As regards the indictment against the Indian Engineers the first point to be noted is that the members of a service do not naturally like the intrusion of an alien new-comer among themselves, and the greater the degree of alienation between the new-comer and the existing members of the service, the greater is the intensity of dislike. In the beginning the Public Works Department was entirely manned by Royal and other Engineers recruited in England. Then came the Cooper's Hill men. The Royal Engineers duly resented their regular entry into the Department in large number and for some time the controversy about the inferior merits and capacity of the Cooper's Hill men as compared with the Royal Engineers went on, but ultimately it had to be admitted that the Cooper's Hill men were in no way inferior. Then began the controversy about the inferiority of the Indian College Engineers (even Europeans). This controversy also was settled in favour of the latter when authorities like Lord Macdonnell and Sir John Hewett testified to the high merits and capacity of the Rurki European Engineers. Now then comes the last stage of this controversy and it is now the turn of the purely Indian Engineers to be branded with inferiority as compared with European Engineers, and this time the controversy has taken a more acute form because the distinction of race and nationality is also involved in it.

(6.) Experience of the past controversies ought to have shown to those who have taken up a hostile attitude towards the Indian Engineers that human nature is everywhere the same and that education is a great leveller. Every race and nationality does not doubt possess its own characteristics both good and bad. But this does not mean that any of those characteristics is unchangeable. The power of adaptation to environments is very strong in man, and with the help of education he is capable of making astonishing transformation. All the defects and shortcomings of the Indian Engineers, which are contained in the indictment, appear to be based on hasty conclusions derived from insufficient data. Because it appears from the report of the Sub-Committee for Public Works Department that there were no more than 86 Indian Engineers in the whole of India in 1886-87, and the European witnesses who found all sorts of faults with them were as many as 41 coming from all parts of India out of a total number of 929 European Engineers. Hence these witnesses must have had (as some of them frankly admitted) a very meagre personal experience of the Indian Engineers. In spite of this most of them did not refrain from making sweeping assertions about the decided inferiority of Indians to Europeans in almost every respect. This shows the general tendency of Europeans to misjudge Indians, which is as much in evidence now at the present time as it was 27 years ago. The European Engineers do not as a general rule come in real touch with the people of this country and therefore cannot possibly have that intimate and all-sided knowledge of their juniors in service (whether European or Indian) which is essential for forming a correct opinion about the real capacity and character of a man. Hence all their ideas and impressions about them are necessarily incomplete and one-sided. Their European juniors mix with them freely and have every opportunity of putting their good points in the

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best light before them. The Indian Engineers on the other hand do not mix much with their European superiors. Their relations with the latter are for the most part formal and official. Hence the knowledge of the European Engineers about their Indian juniors is in most cases superficial and necessarily one-sided. Add to this the fact that it is an inherent tendency of human nature to feel a sort of inward liking and partiality for those who are akin to it, and that there are a number of shibboleths and preconceived notions which many European Engineers entertain about the Indians, and it will become amply clear why a European Engineer generally considers an Indian Engineer essentially inferior to himself.

(7.) Now if we turn to actual facts and figures; it is quite easy to show that the Indian Engineers are in reality quite capable of exercising the highest Engineering skill, and of doing all these things and meeting all those situations successfully which they are considered incapable of doing. The only difficulty in their case has been that sufficient opportunities are not given to them on the *a priori* plea of incapacity.

(a) The Delhi Durbar of 1903 was entirely managed by Indian Engineers.

(b) The Eastern Bengal Railway is being very ably and successfully managed by an Indian Engineer-in-Chief.

(c) From statistics collected specially for this purpose any number of examples are available in which the Indian Engineers have displayed promptness of action and soundness of judgment in cases of emergency, have taken the fullest responsibility in difficult situations and met them successfully, have exhibited great resourcefulness, and presence of mind, have shown a good deal of activity both mental and physical, and have displayed marked aptitude even for Mechanical Engineering.

(d) Some of the Indian Engineers have displayed a marked and special aptitude for Engineering, some for administrative work and some have given evidence of other high qualities on the possession of which the Britishers "have prided themselves for centuries." From what has been said above it is, I believe, very clear that the second part of the indictment given above is as unfounded as the first one. Hence there is no reason whatever why any limitation should be imposed on the employment of non-Europeans.

(8.) These limitations are, however, very much in evidence at present. In addition to the non-employment of the Provincial Engineers in the Imperial service, there is the restriction against promoting Indian Engineers to the administrative grade, in as much as the latter do not get these promotions simply through a good and unblemished record of service as Europeans do. Again it is a fact that none of the Indian Temporary Engineers has yet been made permanent, although a number of European Temporary Engineers have been so promoted on more occasions than one. Such limitations and restrictions against the Indian Engineers are all the more keenly felt because these are often made quite arbitrarily and without any known reasonable cause.

71,743. (VIIb) Working of the existing system of division of service into Imperial and Provincial.—The whole scheme of the introduction of the Provincial Service was based on the assumption that the Indian College Engineers, especially the Indians, could be employed as, what are called, the clerks of works, in England, "for all work of a lower description and the ordinary construction and repairs in the Buildings and Roads branch," and that the European Engineers could be reserved for Engineering proper. This assumption has in actual practice been proved wrong, and it has not been found practicable to make any such distinction between the Provincial and Imperial Engineers. On the other hand the Provincial men have shown that they were not only doing the same work and bearing the same responsibilities as the Imperials, but have on account of their greater and more intimate knowledge of the country and its people, also been able to do their work more satisfactorily and efficiently than the European Imperial Engineers. It has surely been on the basis of facts like these that the Government of India in their

Resolution No. 430-450 E of 1912, have virtually recognized the quality of Provincial and Imperial Engineers by bringing them both on the same list and making the conditions of service the same for both. This being the case there seems to be no good reason why the distinctions in pay and allowances, and leave and pension rules of the two services should not also be removed. This would entail no large or heavy expenditure as the following figures would show. The number of Provincial Engineers in the whole of India at the present time is estimated to be about 165. By rising their pay by one half an expenditure of $165 \times 280/- =$ Rs. 46,200 or say 50,000/- per month will be incurred, against the total expenditure of about Rs. 750,000 on account of the salaries of more than 900 Engineers in the whole Public Works Department of India. This means an increase of about $6\frac{1}{2}$ per cent. only, which is nothing when compared with the annual income and expenditure of the Public Works Department which is as below for the 1910-11:—

Total Income (gross)	Rs. 51,89,68,201
Total Expenditure	Rs. 34,85,90,505
Total Expenditure on Establishment Rs. 5,82,45,379	

71,744. (VIII.) Relations of the service with other services.—It is the Irrigation Branch of the Public Works Department which generally comes in contact with the Civil Department through those who irrigate their lands from canals. In some cases in the past misunderstanding and friction have arisen between the two Departments in connection with Irrigation matters. This has generally been the case on those canals only where the Civil Department had a direct or indirect hand in irrigation; and the cause of this misunderstanding has as a rule been the inability of the civil officers to grasp the more or less technical principles of Engineering. The best way of getting rid of this occasional friction between the two Departments is to give to the Engineering Department the entire control of irrigation and to hold them responsible for both the results and the methods of working. The other alternative of taking away the Revenue work of the canals from the Public Works Department and entrusting it to the civil people, which is sometimes proposed by some civil officers, is most inadvisable and harmful, and is calculated to lead not only to complications of various kind, but to want of efficiency and good management also.

71,745. (IX.) Other points.—The chief problem of the day is—how to improve the relations between the educated Indians and the Europeans. The urgency and importance of this problem is as keenly felt in the Public Works Department as in any other. That the existing state of things is unsatisfactory is admitted on all hands. But the question of reform is difficult. The fight is between old established convictions and preconceived notions on the one hand, and an evergrowing spirit of freedom and self reliance on the other. There was a time when all or almost all Engineers were Europeans and this time lasted for a long while. At that time the subordinates who were of course almost all Indians looked up to the European Engineers as superior persons who were capable of doing wonderful things and taught them how to do them. They admired them and praised them and thereby acquired a good deal of power and influence over their countrymen. The European Engineers, on the other hand, felt duly proud and conceited at the importance attached to their person, and always looked upon their subordinates with a patronizing eye. They used to be particularly pleased with the old fashioned vernacular speaking sweet-tongued and long robed Indian gentlemen who, in the capacity of their Head Munshi or Zilladar, had nothing but praises for their superior master. It was this kind of Indian etiquette which they appreciated most. At the same time they carefully noted all the faults and shortcomings exhibited by their subordinates, and attributed them to their belonging to an inferior race of men, who had acquired certain unchangeable characteristics on account of having passed through centuries of corruption and misrule. It was evidently during this period that the European Engineers must have formed a good many of their preconceived notions and prejudices against the Indians. These

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were in course of time matured in traditions which were handed down by one batch of Engineers to another, till they have come down to the present time.

Now, however, the conditions have changed entirely. The long robed sweet tongued gentleman of old is fast disappearing. Well-educated Indian Engineers possessing the same qualifications and the same capacity for work as the European Engineer are daily increasing in number, and taking the places which were occupied by Europeans, and so far as opportunities are afforded they have proved themselves to be fully equal to all situations however difficult they might

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71,746. (Chairman.) The witness said he represented the Engineers' Association of Lahore, an organisation consisting for the most part of Indian Engineers belonging to the Punjab Public Works Department and the North-Western Railway. It consisted of 55 members, and the opinions expressed in the written statement were generally agreed to by the Association. The main points of the recommendations were the abolition of the division into Provincial and Imperial and the creation of an Imperial Service to be recruited by open competition and under uniform conditions. That proposal was made because Imperial and Provincial Officers were now employed on the same work and had the same responsibility, and also because the Indian College recruits were as good as the recruits obtained from England. That opinion was based on statistics he had collected from other Engineers more than 30 in number and on his own experience. He had had both European and Indian officers under him and the Indian officer had been as efficient as the European officer.

71,747. With regard to the proposal that Rurki should be the main college for training the superior staff, the witness thought in such a large country as India one college would not be enough, and his opinion was that the four existing colleges should be raised to the same standard as Rurki.

71,748. With regard to recruitment, the witness considered that for the present at any rate it would be necessary to recruit about one-third of the superior Service in England, the other two-thirds being recruited in India. It was quite true that as good men could be obtained in India as in England, but he thought the change from English recruiting to Indian recruiting should be brought about gradually.

71,749. The witness considered that specially selected officers in the subordinate Service were sufficiently well qualified on the average to be allowed opportunities of promotion to the superior Service. The subordinate Service might be improved if its members were given better opportunities of promotion and if care was taken to ensure that the men promoted were of high character. They should receive promotion on the results of their work but great stress should be laid on character.

71,750. With regard to the employment of Royal Engineers, the witness said they should not be employed as a rule because they superseded men who were already in the Service. If arrangements could be made to obviate that, he would have no objection to their employment.

71,751. On the subject of recruitment in India the witness did not recommend an all-India examination, because he thought it was unnecessary and would entail hardship on students coming from remote parts of the country. He was therefore in favour of having different centres.

71,752. The witness saw no difficulty in the way of bringing the present temporary Engineers into the permanent cadre. The temporary Engineers should be considered as a source of recruitment and a certain percentage of temporary Engineers should be recruited every year. Administrative difficulties could be easily prevented by promoting upper subordinates and giving them the charge of sub-divisions. In the Punjab Irrigation there were at present 37 sub-divisions in charge of upper subordinates and the number could be easily increased. It was not necessary for the prevention of blocks in promotion to increase the number of divisions. There would be no increase in the junior posts, as the surplus sub-divisions would be given to upper subordinates. In the Punjab Irriga-

tion there were 129 sub-divisions and 43 divisions, and if the sub-divisions were kept 10 per cent. in excess of the number of divisions in charge of the permanent Engineers there would be no block. Now the number of sub-divisions was so great that if manned entirely by permanent Engineers there would be a block, but if the number of sub-divisions in charge of Engineers was reduced there would be no difficulty. The sub-divisions allocated to Assistant Engineers might be reduced to 59 or 54 or some other suitable number, and the others given to upper subordinates. At present 37 of the sub-divisions were in charge of upper subordinates, 45 in charge of temporary Engineers, and the rest in charge of permanent men. He did not suggest that the temporary Engineers should be made permanent at once; a certain percentage of them should be taken every year. For example, forty men being required every year, five would be taken from temporary Engineers and the recruitment from other sources decreased accordingly. The senior men would be taken first. Everything would remain as before except that recruitment from other sources would be reduced.

71,753. With reference to training, the witness said he would favour sending an officer to England for a European training after he had been some years in the Department.

71,754. In the matter of pay, the witness wished to see the establishment of uniform conditions. Assuming it was decided that the market values of Europeans and Indians were different and that one required a higher salary than the other, and assuming also that a uniform scheme on those lines were instituted, the witness did not think that discontent would be less than it is at present. Race distinctions were always resented by the race which was considered inferior, and he objected to any distinctions in pay which were based on race. An Indian drawing less pay was certain to be looked down upon by a European receiving higher pay. Also, the witness said, he would not accept a scheme for one superior service with a foreign service allowance to Europeans. He thought both schemes were equally bad, and if his scheme of equal pay was not accepted he would not prefer the foreign allowance scheme to the existing state of things.

71,755. With regard to the age of retirement, as optional retirement was allowed to Europeans after twenty years' service he wanted the same privilege for the Indian officers also. He did not think twenty years was too early for optional retirement because he believed only those men would retire who needed to retire at that early age. He could not say that a man of 42 or 43 was too old to do any useful work.

71,756. (Sir Murray Hammick.) The witness said he was born in Delhi and entered the service before the Provincial Service was introduced, and he was drawing the same pay as officers in the Imperial Branch and had no personal interest in the recommendations made in his written statement. He had been in the service twenty-three years, had never been to England, and was now an Executive Engineer, first class, drawing Rs. 1,250. He did not think pay on the present Imperial scale would be excessive for the whole of the Provincial Engineers' service. No really good Indian Engineers would willingly join the Public Works Department on rates of pay lower than were given to the Imperial Service.

71,757. The witness said he looked forward to the time when English recruitment would be quite unnecessary for the Public Works Department. He did not think the men now entering the Provincial Service were of a different class from those that entered

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the Imperial Service. It was only owing to their straitened circumstances that they were compelled to enter the Provincial. The reason why men now went to Rurki and passed a stiff examination to get into the Provincial Service was not that the attractions of the Service were sufficient but because there was no other open door to Government employment for men who had not sufficient money to go to England for training. There was very little private employment for Engineers in India, and the only service which could compare with the Public Works Department was the Civil Service which they could not enter without going to England. The Provincial Civil Service he did not think was better than the Provincial Service of the Public Works Department. He did not believe the Provincial Service of the Public Works Department was more attractive than other branches of Government service, such as the Police or Postal Departments. He could not agree that it would be extravagant to pay the whole of the Provincial Engineers' Service recruited in India at Imperial rates of pay, even though they are at present doing the same work at two-thirds that pay. They were in a way obliged to enter the Provincial Engineers' Service because their circumstances did not allow them to train themselves for any other service. Hence it could not surely be called a proper service.

71,758. (Sir Valentine Chirol.) The witness admitted that the market price of work all the world over was determined by the force of circumstances; but pointed out that whilst in other civilized countries only the natural circumstances operated, in India artificial circumstances which could be easily removed compelled many capable Indians to join inferior services.

71,759. (Mr. Madge.) The difference between the Association of Indian College Engineers and the Indian Engineers' Association was that the latter contained Temporary Engineers as well as Imperial and Provincial Engineers, while the former consisted only of Provincial men. There was no bar to Europeans and Anglo-Indians joining the Engineers' Association, but at present the members were all Indians.

71,760. With reference to the statement that Engineering work in India differed from that in England, the witness said there were very large differences. For instance, India had specialised in Irrigation work which was not to be found in England, and the Railways in India were different owing to the number of wide rivers that had to be bridged, and also there was a different style of architecture in India from that obtaining in England. The fundamental principles of Engineering were always the same, but the specialities in India required special study.

71,761. The witness said that in his opinion the experiment of the Provincial Service had failed. On the basis of his own personal experience and of the evidence he had collected he thought it was true to say that as a rule the European Imperial Engineers were not in real touch with the people of the country.

71,762. (Mr. Macdonald.) The witness said he was acquainted with the criticisms on the cost of Government in India made by the Indian people, and he admitted that the argument had been commonly used that England had staffed the Public Service of India with men who were greatly overpaid. He did not dissociate himself from that argument, though in case of the Public Works Department he looked at it from quite a different standpoint. He was of opinion that the administration of an Indian was much cheaper than that of a European, as he could manage things much more economically than a European. Considering that the Engineer's post was of very great responsibility and trust he did not think that the salaries paid to Europeans were much too high in the case of the Public Works Department. For the same reason he was of opinion that the European officer in that Department had never been overpaid. If the Service was composed entirely of Indians he could not favour a reduction of pay, though the next revision in an upward direction could in this case be delayed much longer than otherwise.

(The witness withdrew.)

71,763. (Mr. Fisher.) The witness said that in taking up that position with regard to pay he was considering the question also from the point of view of the taxpayer. If the circumstances of the country changed so much that men employed in the Service were not content with their pay it was necessary that the pay should be revised; otherwise the taxpayer would lose much more on account of the evergrowing discontent of the officer than he would gain by the curtailment of his pay. The witness would not accept his suggestion that his philosophy of progress was that the Public Service of India should show an increasing measure of discontent with their pay every year; his view was that when men found they could not subsist on their pay, and that higher pay was to be obtained elsewhere, they would naturally endeavour to get an increase.

71,764. (Mr. Sly.) With reference to the statistics in the written statement, comparing the proportion of Rurki-trained Engineers with Engineers recruited in England, the witness said that out of 79 Rurki Engineers 18 were Indians and 61 Europeans. The figures were taken up to the year 1895. The Coopers Hill men came out in 1873, so that up to 1895 very few Coopers Hill men could have been promoted to administrative rank. Therefore so far as Coopers Hill was concerned the comparison had very little value. Of the total number of 261 Europeans recruited in England up to 1895, 61 were Royal Engineers.*

71,765. (Mr. Aikman.) The witness said he did not think it was correct to say that at present the Civil Engineers appointed in England, including 10 per cent. of Indians, amounted to 20; that number applied only to one year and did not represent the average, which was not less than that given in his written statement. The witness admitted that the proportions now given by the Government of India, 48.6 of English Engineers, 43.3 of Indian Engineers and Indian College Engineers, and 8.1 of Royal Engineers, were very different from the proportions given in his own written statement, but he thought it was an unfair comparison, first because the upper subordinates should not be included, as they generally did not rise above a Sub-Divisional Officer's post; secondly because the number 20 mentioned above was altogether incorrect.

71,766. With regard to the question of supplying Engineers to smaller District Boards, the witness suggested that upper subordinates might well be employed as they were quite qualified for such positions.

71,767. With regard to training, the witness said he had known of Engineers from England being appointed direct to sub-divisions, but as a rule they were put under an Executive Engineer for training.

71,768. With reference to the question of higher rates of pay for imported labour, the witness said higher wages were paid to imported coolies such as Pathans, not because they were imported, but because they were capable of doing more work than the local labourer.

71,769. The witness did not admit that the fact that Indians were sending their children to England for education was an admission that Indian education in Civil Engineering left a good deal to be desired, but he admitted that in case of Electrical and Mechanical Engineering, education in India was backward.

71,770. With reference to the statement that not a single Indian in the Punjab was allowed to enter the administrative grades, the witness said he did not think that was because the men were not fit for such grades, as he knew of at least one case of an Indian Engineer who was quite competent to fill an administrative post.

* The witness afterwards pointed out in a written note that the admission about comparison with Coopers Hill being of little value was due to an oversight. The figures were taken up to 1895 so far only as recruitment was concerned. The figures for promotion to administrative grade were, however, up to date. Hence all the Coopers Hill men who joined the Punjab and had risen up to the administrative grade were included in the comparison, which was in consequence fully applicable to the Coopers Hill Engineers as well.

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Mr. B. K. FINNIMORE.

At Calcutta, Saturday, 20th December, 1913.

PRESENT:

THE RIGHT HON. THE LORD ISLINGTON, G.C.M.G., D.S.O. (Chairman.)

THE EARL OF RONALDSHAY, M.P.

SIR MURRAY HAMMICK, K.C.S.I., C.I.E.

SIR THEODORE MORISON, K.C.I.E.

ABDUR RAHIM, Esq.

WALTER CULLEY MADGE, Esq., C.I.E.

FRANK GEORGE SLY, Esq., C.S.I.

HERBERT ALBERT LAURENS FISHER, Esq.

JAMES RAMSAY MACDONALD, Esq., M.P.

And the following Assistant Commissioners:—

H. H. GREEN, Esq., Superintending Engineer, Bengal.

SHASHI BHUSHAN MAZUMDAR, Executive Engineer, Bengal.

R. R. SCOTT, Esq. (Joint Secretary).

B. K. FINNIMORE, Esq., Chief Engineer, Bengal.

Written Statement relating to the Public Works Department.

71,771. (I.) Method of Recruitment.—Imperial Service.—All Imperial Engineers are now recruited in England. They are selected from candidates who answer advertisements of the requirements of the Department. The selection is made by a Selection Committee appointed by the Secretary of State. Formerly recruitment was made by competition among students of the Royal Engineering College, Cooper's Hill.

So far I found the Engineers appointed to Bengal under the present system are in no way inferior socially, or so far as their engineering knowledge goes, to those recruited formerly from Cooper's Hill. I do, however, consider that there is not the same *esprit de corps*, or discipline that there was formerly among the Cooper's Hill students. These qualities I consider of as much importance as superior engineering attainments. There are many appointments in the Public Works Department for which administrative ability, honesty of purpose and independence of character are even more essential than engineering training. I consider that the Cooper's Hill training was specially good for the production of such qualities, and I rather fear that the Department may suffer in future from the want of them. If it is not possible to re-establish such a College as Cooper's Hill was in England, I would suggest that the Selection Committee should consider these points in selecting candidates. I think it very desirable that one or even two members of this Committee should be either Engineers of the Department on leave or who have recently retired. Such men would know the better stamp of men required for work in the Department than men who were not serving, or have not recently served themselves, in it.

I consider that if Indian candidates of requisite qualifications can be found among those applying for these appointments there is no reason why the present limit of 10 per cent. should not be increased. Whether the candidates are Europeans or Indians, the best men should be appointed. What we want are men of independent character, active habits and good health, who are likely to form independent judgment,

act on it, and not mind being sent anywhere, where the exigencies of the service might require them. It is very probable that for some time to come the proportion of Indians with such qualifications will not come up to the 10 per cent. limit now allowed.

Provincial Service.—The recruitment for the Provincial Service in Bengal is entirely from the Sibpur Engineering College and the large majority of Bengalis. During the last 20 years the nationality of the successful students has been Bengalis 17, Eurasians 4. Bengalis do not, as a rule, care for Engineering as a profession, their special qualifications fitting them much better for the Legal and Medical professions, and therefore we do not get the best of them for Engineers. Bengal cannot be considered on the same lines as the Punjab or the United Provinces, who obtain their recruits for the Provincial Service from the Rurki College. A more efficient Provincial Service would probably result if a Central College for the higher training of Engineers for all India were established, where the Bengalis would come in contact with the more robust races of Northern India.

At present at the Sibpur Engineering College there are many more students than there are Engineer appointments, and all Engineering students who fail to get appointments as Engineers, i.e., in the Superior Service of the Public Works Department, readily accept appointments as Overseers on Rs. 80 to 100 a month in the Upper Subordinate service, which, under present regulations, is mainly recruited in this way. Such men are, as a rule, the men who go to Sibpur in order to obtain some employment, which will give them a living, not because they desire to be Engineers. They are, as a rule, not practical men, and at the same time they feel dissatisfaction that a man who perhaps has simply gained a few more marks than they have in an examination should obtain an appointment in the Superior Service of the Public Works Department commencing on a salary of Rs. 250 a month with a prospect perhaps of becoming a Superintending or a Chief Engineer, while they themselves are relegated to the Subordinate Service for the whole of their lives.

I advocate that the Provincial Engineering Colleges should confine their attention to the training of subordinates, and that a Central College for the whole of

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[Continued.]

India on the lines of the Royal Engineering College, Cooper's Hill, should be established, and that from this College the Provincial Engineer services should be recruited.

I do not consider that so far the average Indian-trained Engineer is equal to the average English-trained Engineer. By an Indian-trained Engineer I mean the Indian-trained Engineer that we deal with in Bengal—that is, the Sibpur-trained Engineer. We have recently reported to the Government of India that to fill the Engineer appointments in Bengal we require 60 per cent. English-trained Engineers. This is in regard to the fact that we consider we require men superior to the average men we have hitherto obtained from Sibpur for 60 per cent. of the appointments. This indicates the necessity under present conditions for recruitment of a large proportion of our superior establishment in England. To provide for the proper use of the better men among the Indian-trained Engineers, I propose that if properly qualified men could be found they should, after five or six years' service in the Provincial branch, be transferred to the Imperial branch. For the present I would limit such recruitment of the Imperial branch to 10 per cent. If satisfactory men up to this number are found, and it is in the future felt that there are more men qualified for such promotion than this limit would satisfy, the limit may be raised.

71,772. (II.) Systems of Training and Probation.—Regarding "Training," as indicated in paragraph 71,771, I consider the best training for the Department would be an Engineering College on the lines of the Royal Engineering College, Cooper's Hill, for Imperial officers in England, and a similar College for the training of Provincial officers in India, with a year's practical training in each case.

Regarding "Probation," I do not consider it necessary that the Imperial Service Engineer should be on probation. It is very desirable, when he first comes to the country, that he should be given a specific independent charge and placed in charge of a section or subdivision to learn his work under a good Subdivisional Officer or Executive Engineer. I consider it desirable that the Provincial Service Engineer should as at present be on probation for one year. He should as a general rule be placed where he can get continuous help and instruction. He should be placed in charge of some definite work after six months' satisfactory probationary service. I differentiate between the Imperial Service Engineer and the Provincial Service Engineer, because as a rule the Imperial Service Engineer has selected engineering as his profession because he wishes to be an Engineer, whereas the Provincial Service Engineer, with whom I have come in contact, often selects engineering as a means of livelihood, and not because he wishes to be an Engineer.

A suggestion has been made that before appointment to the Department Indian-trained Engineers should be given a year's practical training in England. I do not think that at that stage of their career it could be of practical use. It would, I think, be far better if selected officers were allowed to go to England for such training after five or six years' service.

71,773. (VIIb) The working of the existing system of division into Imperial and Provincial.—The division of the Department into "Imperial" and "Provincial" is, I consider, essential so long as it is necessary to import Engineers from Europe to fill a proportion of the appointments. Europeans imported must have many expenses, which Indians living in their native country do not have to face. It is not only fair, but necessary that they should be paid more highly.

71,774. (IV.) Conditions of Salary.—I consider the present rate of salaries sufficient, but considering that the cost of living in India has increased so much of late years, I would advocate improvement in the Provident Fund, i.e., that Government should add at least 50 per cent. on to the amount subscribed by each officer. At present all that the officers get is 4 per cent. on deductions from their pay. It is very hard for married men to save on their present pay, and it is,

in my opinion, far better that Government should improve the Provident Fund rather than increase salaries: it might only induce habits of extravagance among younger men and while they are bachelors. I advocate very strongly that special allowances should be given to European officers stationed in Calcutta. The Bengal Government have repeatedly urged this on the Government of India, but so far with no result. Officers stationed in Calcutta have very responsible work, and are specially selected. The cost of living in Calcutta is far heavier than in the mufassal. It is very unfair that because an officer is good at his work he should be practically fined by being brought to Calcutta. I know for a fact that all European officers stationed in Calcutta, unless they have private means, have a struggle for existence. From the moment they come here they desire to get away. This makes it increasingly difficult to fill the Calcutta appointments satisfactorily. For the efficient working of the Department it is essential that a portion of the Calcutta appointments should be filled by Europeans. The Bengal Government have recommended special allowances of Rs. 250 a month for Superintending and Executive Engineers, and Rs. 150 a month to Assistant Engineers. This is not necessary in the case of Indian officers, as they readily come to Calcutta; in fact they are continually applying for transfer there.

71,775. (V.) Conditions of Leave.—Imperial Engineers.—I consider the present leave rules suitable, except that there should be no limit in the accumulation of privilege leave. Leave should be granted when officers can be spared and the present restrictions as to period of service between leave be removed, also after eight years' service a minimum leave allowance, while on furlough or special leave, of £500 should be allowed; if a man be invalided before eight years' service, £350. There should be no maximum limit as at present of £800.

Provincial Service.—I consider that the proportion of furlough should be one-fifth of the service to enable the full amount of 5 years' leave being enjoyed in the service of 30 years.

Study leave to Europe, Egypt and America might be allowed to Indians on favourable terms to encourage them to visit engineering works in those countries. Such leave to be on three-fourth pay subject to a maximum of £40 a month and a minimum of £25 a month. It might extend to four months at a time of intervals of not less than six years. Two such periods of leave might be allowed to an officer in his total service. A report of works visited to be made to Government.

71,776. (VI.) Conditions of Pension.—Imperial Service.—I think that the pension of the Imperial Engineers recruited in Europe should be improved, that is to say, it should be £500 after 25 years' service and £700 after 30 years' service, with extra pensions for approved service in the administrative grades. Considering the increased cost of living in India, it is extremely hard for officers to save any considerable amount during their service, and as a rule all they have to live on on their retirement is little more than their pension, which at Rs. 5,000 a year as fixed at present is quite inadequate to meet their needs specially if they have children to educate, which must often be the case owing to the fact that their present pay does not enable them to marry until somewhat late in their service.

Provincial Service.—The present pension conditions are, I consider, satisfactory.

71,777. (VIIa) Limitations in the Employment of Non-Europeans.—I see no reason why the permissible limit of 10 per cent. in the appointment of Indians should not be raised, provided suitable men can be obtained.

The rule should not be that "10 per cent. must be employed," but that "10 per cent. may be employed." This limit to be raised when it is found that the supply of suitable men exceeds this.

71,778. (VIII.) Relations of the Service with Indian Civil Service and other Services.—These are quite satisfactory.

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[Continued.]

Mr. B. K. FINNIMORE called and examined.

71,779. (Chairman.) The witness stated that he was appointed to the Public Works Department in 1881, after being trained at Cooper's Hill, and became Chief Engineer and Secretary to the Government of Bengal in January 1911. Some four months ago he was appointed to the Chairmanship of the Calcutta Improvement Trust.

71,780. On the question of recruitment the witness gave it as his opinion that the men who were formerly recruited from Cooper's Hill came as a rule from a better class than the recruits appointed by the Secretary of State. There was no friction at present between officers belonging to the two classes of the Imperial Service.

71,781. The witness was in favour of the maintenance of the Provincial Service on grounds of economy. It was only fair that European officers should be paid higher rates of salary than locally recruited officers. He would, however, make an exception in favour of specially well qualified Provincial officers by promoting them to the Imperial branch on Imperial rates of pay. The general principle should be laid down that the Provincial Engineer should get lower rates of pay than the non-domiciled European Engineer, but he would waive the principle in the case of exceptionally well qualified officers. He laid more emphasis, however, on the maintenance of the general principle than on the exception he proposed to make to it. If he could not get both the principle and the exception, he would prefer to have the principle alone. In any case the removal of the term "Provincial" would probably go some way towards removing the present feeling of grievance.

71,782. Under his scheme he would recruit 60 per cent. of the superior staff from among English-trained Engineers, and in that proportion there would be an indeterminate number of Indians. If a central college could be established in India, he hoped it might in time be possible to recruit in Indian more than the 40 per cent., which he considered was possible under present conditions.

71,783. He explained that the candidates for the Provincial and Subordinate services were trained in the same classes at the Sibpur College, but his idea was to have a central Engineering College for the whole of India, with a higher standard of teaching. He did not anticipate any difficulty in getting recruits for this college from the different provinces. Even if the course at Sibpur was modified to the extent of having distinct Provincial Service classes, there would still be the difficulty of not having the same standard of teachers. Also a good many more men would be produced than would be required for some little time to come, and consequently there would be a number of discontented men who could not find employment.

71,784. With regard to pay, a subordinate entering the service began at either Rs. 80 or Rs. 100 and became eligible for a subdivisional charge, according to the exigencies of the service, in from two to five years. Occasionally temporary subdivisions had to be formed to which junior men were appointed.

71,785. There was no difficulty with regard to the few temporary Engineers in Bengal, who had been only kept on for a year or two. No temporary man was now doing ordinary divisional work, but there was one in Sikkim, and another was supervising Government estates. They were liable to be dismissed at a month's notice.

71,786. One Royal Engineer had been appointed to the Bengal establishment, but had not yet joined. The employment of Royal Engineers was being extended, and he believed they would be useful in the service. No instance had arisen in Bengal of Royal Engineers coming into the service over the heads of civilians.

71,787. He considered a year's practical training in England necessary for Imperial recruits. The Selec-

tion Committee should satisfy themselves either that a man had already been trained on works or that he got such training before he came to India. Provincial Service Engineers might go to England for training after they had been in the service for five or six years.

71,788. There were no facilities for study leave at present, and any officer visiting works at home had to pay his own expenses. He thought officers in the service would be satisfied if they had the same allowances as the Indian Medical Service, but he suggested three-fourths pay.

71,789. Salaries were adequate, but he suggested an improved provident fund with a 50 per cent. contribution on the part of the Government. He did not approve of two time-scales, one for Assistant Engineers and the other for Executive Engineers, with promotion from one class to the other by selection, as it would spoil the prospects of the service. At present promotion was by seniority. If a man was not fit for a division he would not get it, though that was an exceptional case. If a man was not in a divisional charge from no fault of his own, but owing to a block in the service, his incremental pay should continue.

71,790. On the subject of a family pension fund, the witness said there was a general desire in the service for the establishment of a fund on much the same basis as the provident fund which he had mentioned.

71,791. With regard to retirement, a qualifying service of 20 years might be rather short from the Government point of view, but very few men took advantage to retire after only 20 years' service. If any improvement was made in the scale of pensions, it would no doubt be reasonable that the time of service should be lengthened.

71,792. (Lord Ronaldshay.) At present in Bengal very junior men were holding charge of divisions. Promotion was good in Bengal at present, and he hoped it would be so for some years to come. All the officers had a division before they reached the Rs. 800 grade. If they had not done so, they would not be entitled to advance beyond Rs. 800.

71,793. With reference to the suggestion that before appointment to the department Indian-trained Engineers should be given a year's practical training in England, his view was that at that stage of their career it would not be of practical use. After men had done a certain amount of work in the department their powers of observation would be better trained and they would have a greater appreciation of the class of work which was being carried out in England. If they went to England at first they would not appreciate the work so much or be so interested in their profession as to observe the differences between work in England and work in India.

71,794. He was not prepared to say that the pay of the Indian-trained Engineer was insufficient to attract a good class of candidate, but it was a fact that the Indian-trained Engineer was not equal to the English-trained Engineer. By recruiting a certain proportion of the Imperial men by promotion from the Provincial Service a better class of man might be induced to come in, but he very much doubted whether that would be so. By promotion he meant simply altering the pay, as officers in the Imperial and Provincial Service were already on one list. There was a feeling at present among some Provincial Engineers that they were as good as men in the Imperial Services and that they should receive the same pay. He was afraid that the scheme he proposed involved the admission that the higher pay given to the European was not given merely because he was serving in a foreign country, but because he was a man of superior qualifications to the Indian, and he agreed that this in a way undermined the whole theory of a foreign-service allowance.

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[Continued.]

71,795. (Sir Theodore Morison.) According to the rules an Engineer could not rise by the time-scale above Rs. 800 unless he was actually in charge of a division, but everybody got promotion to executive rank unless he was particularly bad. A man in the ordinary course went on from Assistant Engineer to Executive Engineer; there was no choice of the best assistants for executive charges. As long as their reports were good the promotion to Executive Engineer was purely by seniority.

71,796. The witness did not propose to give a foreign-service allowance to Indians recruited in England, but if an Indian was selected who had spent many years of his life in England, and had received an expensive education there, it might be necessary to do so. He had had very little experience of Indians trained in British institutions, but from what he had seen of them he should say the result was not superior to the training they received in Indian institutions.

71,797. On the subject of limitations in the employment of non-Europeans, the witness said if more than 10 per cent. of Indians were found suitable they might be appointed; good men should be appointed whether they were English or Indians. Practically, he would revise the two rules with regard to nationality.

71,798. (Mr. Sly.) With regard to the bar at Rs. 800, it was true that the unfit were rejected, but that could hardly be called selection, as a man had to be particularly bad not to be put in charge of a division. The rule had been interpreted in Bengal in such a way as to give nearly every man a chance. He did not propose that the bar should be removed. If a man was passed over through his own fault, his pay should be limited to Rs. 800; but if promotion became so bad that it was not possible to give him a division, he should go on to the higher pay. It would be hard luck for a man to have his promotion stopped as a result of irregularities in recruitment. Men should be given to understand that they would rise to the top rank if their work proved satisfactory, since without that understanding the class of man who would come forward would be distinctly inferior. The Government made certain promises and, if those promises attracted good men, the Government must adhere to them.

71,799. As a rule when a man reached 55, he had served about long enough. He thought it would cause a great deal of dissatisfaction to alter the 55-year rule now, and it was not desirable in the interests of the department that men should stop on longer. He would give Government no discretion in that matter; it would be better as a matter of fact for the rule to be extended to all the departments of Government service.

71,800. On the subject of the proposal to establish a provident fund with a 50 per cent. contribution from Government, the witness said he understood the State Railways received a Government contribution amounting to as much as 75 per cent. On the other hand, the State Railway officers had no pensions. He did not propose that the pension scheme for the Public Works Department should be given up. The 50 per cent. contribution from Government would mean about Rs. 33,000 per man. He favoured a provident fund rather than a family pension fund.

71,801. With regard to house allowances, the witness stated that a married man only received a house allowance in Calcutta when he had his wife with him; when the wife was not there the allowance ceased. Even a man with Rs. 1,000 a month found it extremely hard to live in Calcutta, where the cost of living was 50 per cent. more than formerly, and it was essential that a substantial allowance should be given. He recommended a special allowance in addition to the house allowance. There was no necessity to give it to Indian officers, because they were anxious to live in Calcutta.

71,802. On the subject of officers being allowed to take private work during active service, the witness thought that should be strictly limited. He agreed with the present system under which men were occasionally asked for a professional opinion

outside their ordinary working hours, but he would not encourage them to go in for private practice *per se*. The fees for such work had to be sanctioned by Government. He saw no objection to men taking up private work when on furlough in England, but he would not encourage them to take furlough in India for the purpose of doing private work. It was rather desirable that they should gain experience by doing such work in England. The great point about furlough was not that it was a holiday, but that it gave a man a change of climate.

71,803. With reference to the recruitment of 60 per cent. of the superior cadre in England, the witness said in Bengal that was the exact proportion at present, because 8 of the Imperial men were trained at Sibpur under the old conditions. At present 70 per cent. was recruited in England and 30 per cent. in India, and his suggestion was that the 70 per cent. should be reduced to 60 per cent. As far as Bengal was concerned, he thought that 60 per cent. was the minimum proportion. The promoted subordinates amounted to 10 per cent., and he thought the promotion of subordinates was satisfactory, as several good practical men had been obtained in that way. He was in favour of such men being allowed to rise above the Assistant Engineer's grade.

71,804. (Mr. Fisher.) It would be a good thing for engineering knowledge in India that a certain number of engineering colleges should be definitely marked as inferior. In training subordinates it was a mistake to give them too much theoretical training, because when they came into the department or joined a firm where subordinate work had to be done they felt they were doing work below their attainments. He would have a superior college for Engineers only, and he would not recruit subordinates from that college. The entrance test should be a high one. At present men who went to Sibpur had not sufficient general education to understand what they were taught. They went through a course which on paper should make them very well-trained Engineers, but as a matter of fact a large number of them simply committed a great deal of it to memory. Very few of the examination papers showed that the students understood what they were talking about. He thought in some ways Rurki men had been superior to Sibpur men and had been more ready to rough it, but he could not speak very definitely on the subject. He agreed that the three arguments which had previously been put before the Commission in favour of the establishment of a central college were equally good: that it would enable the Bengali to mix with the natives of the north; that it was inexpedient to mix up the subordinate with the superior classes; and that by concentrating resources on a central college a more efficient college would be produced.

71,805. On the subject of recruitment in England the witness favoured a return to the Cooper's Hill system, because he was slightly disappointed with recent recruits. He was thinking, however, of the early days of Cooper's Hill when there was competition for entrance and an assured appointment and a man had to work hard to qualify.

71,806. There were one or two men in the service from the Cambridge Engineering School, and there were men from Dublin University and the Central Technical College, and King's College.

71,807. On the Board of Selection there should be at least one, if not two, Engineers who were either now in, or had recently retired from, the service. He had generally found the impression he formed of boys was fairly correct, and therefore believed that if he had been on the Selection Board he might have been able to select more suitable boys than had been selected.

71,808. He favoured the plan of sending Indians to England after they had had some experience of engineering work in India. Any arrangement made with firms to take them would have to be carefully considered. It would be desirable to place the officers with firms of contractors.

71,809. (Mr. Madge.) The witness thought a central college would turn out first-class Engineers who would be of value to India. There was a proposal

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[Continued.]

now to transfer the Civil Engineering College of Sibpur altogether to Dacca, and that would rather be against the strengthening of Rurki. He was in favour of strengthening Rurki rather than establishing another college at Dacca.

71,810. He desired to qualify his suggestion that officers might be promoted to the Imperial Service by saying that they should be transferred from the Provincial to the Imperial branch, not promoted. He would place no limit to the promotion of Indians or Anglo-Indians already in the Imperial Service. When it came to a question of promoting a man from Executive Engineer to Superintending Engineer, he would promote the best man available whether he was an Englishman or an Indian, and he thought that was the general feeling of the service in Bengal. The tendency rather was to promote an Indian if he was fit. He did not agree that promotion should fall short of administrative rank.

71,811. (Mr. Abdur Rahim.) On the subject of the proportion of Indian-trained Engineers who had attained administrative rank, the witness thought the figures for the last 20 years would show a very surprising change. Up to 1895 the Cooper's Hill Engineer had not been long enough in the country to rise to administrative rank, the men at that time being the old staff college men trained at Rurki and the Stanley men. A very fair proportion of Indian-trained Engineers had attained to very high rank in the service, but they were recruited from rather a different class of men from the present recruits. In saying that the average India-trained Engineer was not equal to the England-trained Engineer he had referred chiefly to the men he had had experience of—natives of Bengal-trained at Sibpur. Three or four Indian-trained Engineers had reached the position of Superintending Engineers in Bengal. If a man was at all likely to be a success he was promoted, but it did not follow that he was as good as the officer trained in England.

71,812. The proportion of Indian-trained Engineers to English-trained Engineers in Bengal was 40 to 60; for the whole of India he believed it to be 30 to 70.

71,813. The training at the Sibpur College was not so good as it was at Rurki, and there was some idea of improving the training when the college went to Dacca. The reason for removing from Sibpur to Dacca was that Sibpur was unhealthy.

71,814. He desired to see boys entering the college with the same standard of general education as those who went to Cooper's Hill. That would do more than anything that could be done inside the college itself. The training was not defective, but the students were unable to assimilate it.

71,815. On the question of allowances, the witness thought Indians had compensating advantages; it was rather a saving to them to come to Calcutta, whereas it was an expense to Europeans. The only object of the allowance was to keep Europeans contented in Calcutta. Nearly every Indian was anxious to be transferred to Calcutta, and they never referred to the necessity of an extra allowance.

71,816. He would like to have the 10 per cent. rule governing the appointment of Indians to the Imperial Service made permissive and not mandatory, because under the present mandatory rule inferior men might be appointed. It was true there were more qualified men than were needed to fill 10 per cent. of the vacancies, but really good men were required, not simply qualified men. A mere examination was not a sufficient test of qualification. He would have no limitation either way, English or Indian, provided the best men were obtained. He preferred selection as at present, but thought the best system would be the Cooper's Hill system, though that was beyond the dreams of probability now. He did not think English boys would be favoured by the Selection Board. He did not object to a competitive examination of selected candidates, but believed it would involve the necessity of raising the pay in order to attract candidates.

71,817. (Sir Murray Hammick.) The witness said that if a central college for India were established, he would still make appointments to the service on

a Provincial basis, keeping a certain number for Bengal to be competed for by Bengalis, and so on.

71,818. He wished to correct the statement that men should be brought into the Imperial Service after an experience of five or six years, and he would make it ten years, by which time a man would be qualified to become an Executive Engineer and would have reached a stage at which it could be fairly decided whether he was likely to be a good Executive Engineer or not. In Bengal a certain number of Imperial Officers were wanted, because there were charges which were more important than others and which could be only properly looked after by men with an English training. Men promoted from the Provincial Service to the Imperial Service would be given a trial in one or other of those charges. There were also a certain number of heavy divisions and a certain number of light divisions, for which he would generally choose an Imperial officer or the very best of the Provincial Engineers. He had employed an Indian as Under-Secretary for some time and this officer would now be put in charge of an important division. He thought the system proposed would make for the contentment of the service.

71,819. His proposal for a provident fund was put forward as an alternative to his proposal for increased pay. If a provident fund was established, the pay of the Public Works Department was sufficient. Considering the increase in the cost of living, it would be necessary in order to make the pay the same as it was 20 years ago to raise it by 20 per cent.

71,820. (Mr. Green.) The witness said he was not aware that retirement at 55 was the rule in the Pilot Service owing to the work being so arduous. The work in the Public Works Department was arduous also.

71,821. There would be very great difficulty in appointing European officers to Calcutta unless special allowances were paid.

71,822. (Shashi Bhushan Mazumdar.) It was quite possible for the Selection Committee to judge a recruit by seeing him and considering his record. No recruit from England was trained in Indian engineering and Indian languages, and he did not think it was necessary they should be tested by an examination in such subjects. For the first year or two an officer from England was probably not as useful as a man recruited in India, but he did not agree that on that account an English recruit should be kept on probation for a year or two. That would probably keep good men from joining. He could not recall any instance in Bengal when the officer appointed from England had not been likely to prove efficient.

71,823. It was quite probable that the prospects offered to students of the Sibpur College were not such as would attract the best intellect of India. He did not think the Provincial Service had a bad name. He provided for the promotion of really good men to the Imperial Service, and as better men came forward the proportion would be increased; and he thought that was a fair response to the aspiration of the Indians. Many of the graduates from Sibpur who accepted posts in the service afterwards became District Engineers.

71,824. He proposed that the central college should give a really good engineering training. He was not aware that the Rurki Engineering College had been pronounced by experts to be as good as any in the world.

71,825. With regard to his proposal to promote selected Provincial Engineers after ten years' service, he merely proposed that the very best of the men should be transferred to the Imperial Service. As a rule the English-trained Engineer took up engineering owing to a liking for the work, but the average Indian who went to Sibpur did so not because he wished to be an Engineer, but because he desired employment.

71,826. With reference to the payment of house allowances to Europeans in Calcutta, the witness said he was not aware that the Indian had heavier expenses in connection with his family. He would not differentiate between married and single men or between men with small and large families.

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71,827. He recommended that Imperial officers should be allowed more furlough than Provincial officers, because he did not think the Indian-trained Engineer in his own country required as much change as a man recruited from Europe. For the purpose

(The witness withdrew.)

F. A. A. COWLEY, Esq., Superintending Engineer, Bengal.

Written Statement relating to the Public Works Department.

71,828. (I.) Method of Recruitment.—Imperial Service.—Having regard to the many institutions in the British Isles which give a training in Engineering Science adequate to the needs of the Public Works Department, the establishment of a college on the lines of the late Royal Indian Engineering College, Cooper's Hill, may now be considered impracticable and selection from the open market must be accepted as an established fact.

(2) The present system of recruitment is generally considered satisfactory, but in my opinion should be limited to candidates who have resided at least five years in Europe. There is a disadvantage in recruiting Indians in England, as it is not always the most suitable candidates who are willing and can afford to go to England.

(3) Only degrees which are recognised by the Institute of Civil Engineers as qualifying for their associate membership should be accepted, or preferably each candidate for admission to the Public Works Department must be an Associate Member of the Institute of Civil Engineers (England).

(4) Assuming that recruitment by selection is maintained, 40 per cent. of the Selection Committee should at least be senior officers of the Public Works and Railway Departments either on the active or retired lists.

(5) The most suitable age for recruits to come out to India is between the ages of 21 and 24 years.

(6) There is strong resentment in the department at the appointment of Royal Engineer officers or Temporary Engineers to the permanent scale above the heads of men already in the department. They should enter the department early in their career and enter with their contemporaries. This rule should permit of no relaxation.

(7) Candidates appointed to the Imperial Service should not be appointed on probation—(vide also section 11)—but a year's practical training on works in Europe should be insisted upon and they should be required to pass within three years of their arrival in India the examination known as the departmental examination. Failure to pass this examination should entail loss of increment in salary and seniority.

(8) Provincial Service.—For recruitment in India, the Colleges for Engineers should be separate from those for subordinates. It is not desirable that members of the superior service should live on intimate and familiar terms with subordinates as now happens, and is encouraged by the two classes being educated together at the same college. There should be one central college for recruitment in India to the Provincial Service.

(9) Entrance to the college should be—

(a) by selection, to be followed by

(b) a competitive examination.

(10) Candidates should be between the ages of 22 and 26 on recruitment.

(11) Candidates admitted to the department should be appointed as Assistant Engineers on probation and required to qualify by training for confirmation; they should also be required to pass the same examination as Imperial Engineers.

71,829. (II.) Training and Probation.—It should be made a condition of appointment to the Imperial Service that every candidate shall have had one year's practical experience on Engineering works in the British Isles preferably.

(2) Candidates should not be appointed on probation to the Imperial Service, but failure to pass the departmental examination in Accounts and Engineering after appointment should entail loss of increment and seniority.

of visiting engineering works the Provincial Service should be given study leave. He did not agree that the same work and service should entitle everyone to the same leave and pension irrespective of the conditions of recruitment.

(3) Candidates appointed to the Provincial Service should be required to qualify for confirmation—the period for qualifying should be one year—and this limit should in no case be exceeded by more than two years in all. After appointment officers should be required to pass the same departmental examination as Imperial Service officers.

(4) Any officer before being given charge of an Irrigation or Embankment Division should also be required to pass the examination in Law as now required under present rules.

(5) Care should be exercised in placing newly joined recruits under sound and sympathetic officers, and they should be placed on suitable works.

(6) Owing to the very extensive use of English throughout Bengal Engineers appointed in England are not required to attain a high degree of efficiency in the Indian languages; the present system of departmental examination is sufficient.

71,830. (III.) Conditions of Service.—It is desirable that the Engineers of the department should be constituted into a service under some name such as Indian Engineering Service (I. E. S.). The term Public Works Department is used by subordinates as well as clerks and cannot consequently be held to distinguish an Engineer officer.

(2) The cadre of the permanent Engineers should be more frequently revised. The magnitude and extent of the work in charge of the department is continually increasing and the maintenance of these extended works is part of the duty of the officers of the department.

(3) Officers of the Royal Engineers who are now brought into the service are usually credited with extra departmental service to such an extent as to give them departmental seniority over Civil Engineers who are seniors to them in age and standing in the department. It is necessary in the interests of Government that employment should be found for Royal Engineers in the department, but in justice the appointments should be made in such a manner as not to impair the prospects of Civil Engineers of the same age and standing already in the department.

(4) Similarly, if Temporary Engineers are transferred to the permanent list, the same principle should be observed.

(5) Future appointments of Temporary Engineers should only be made on the specific understanding that the holders will not under any circumstances be brought on the permanent scale. It would remain with Government to improve the temporary service if it is considered expedient. Thus the provident fund for temporary employees on State Railways might be extended to all Temporary Engineers in the Public Works Department.

(6) Article 649 of the Civil Service Regulations, which provides for the compulsory retirement of Civil Engineers, who, on attaining the age of fifty years, have not been promoted to the rank of Superintending Engineers, should be more rigidly enforced in the case of officers who, on reaching that age, are reported as not qualified for promotion to the rank of Superintending Engineers. The principle laid down in paragraph 80, Vol. I, Public Works Department Code, that promotion to the administrative ranks should be by selection as opposed to that of seniority, is the principle on which the above compulsory retirements should be enforced.

(7) Recruitment should be regulated so as to ensure a regular flow of promotion.

(8) There should be some ruling under which Government may compulsorily retire officers of the department who are reported on as unsuitable or inefficient. An officer who has been twice unfavourably reported upon in consecutive years should be warned that if he does not prove himself efficient his

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services will be dispensed with. If, after another two years, he is still found unsuitable, he should be compulsorily retired under the ordinary pension rules allowed for men who are compulsorily retired as invalids. Of these four unfavourable annual reports, at least three should be by different Superintending Engineers.

71,831. (IV.) **Conditions of Salary.**—In 1908 the scale of pay of the Public Works Department was reorganized and placed on an incremental basis, but at the same time the exchange compensation allowance formerly given to officers was withdrawn. The net increase in emoluments was not commensurate with the increased cost of living in India, which has been so marked a feature of the last decade.

Before proposals are advanced for the improvement of furlough and pension allowances, which will serve to alleviate those hardships which are most severely felt; and believing that these proposals cannot fail to receive favourable consideration, specific suggestions for an improvement in the scale of pay are not advanced. However, if the Royal Commission, on the careful consideration of the question in regard to other services or departments, consider that the increased cost of living deserves an increase in the salary as at present drawn, it is urged that the Public Works Department should participate in any such general improvements as the Commission desire to recommend.

(2) Under the reorganization scheme of 1908 it is ruled that an officer may not draw more pay than Rs. 800 per mensem unless he is in charge of a division, or in a charge which in the opinion of Local Government is of equal importance. This is unjust to an officer who, though fully qualified, does not obtain a divisional charge simply because there is no vacancy for him. It is urged that the rule should be amended to the effect that an officer of the Imperial Service reported as fit to hold a divisional charge should continue to receive the ordinary increments laid down in the scale, irrespective of his being in actual divisional charge. Similarly, a Provincial Engineer, who is reported on as fully qualified for a divisional charge, should be allowed to draw increased salaries beyond Rs. 535 per mensem according to the ordinary increments laid down in the scale.

(3) Similarly, Executive Engineers attain their maximum pay of Rs. 1,250 per mensem after completing 19 years' service. If, on account of there being no vacancy, an Executive Engineer though otherwise qualified is not promoted to Superintending Engineer's rank after completing 22 years' service, he should be given a personal allowance of Rs. 150 per mensem. Similarly, a Provincial Engineer, who is certified as fit for administrative rank, should be given a personal allowance of Rs. 100 per mensem after completion of 22 years' service.

(4) The present division of the rank of Superintending Engineer into three classes gives rise to blocks in promotion, so that it happens that an officer for no fault of his own never attains the first class rank, or the period of time during which he remains in the second and third class ranks is unduly prolonged: there should be two classes of Superintending Engineer only with salaries as follows:—

	Imperial service.	Provincial service.
	Rs.	Rs.
Superintending Engineer, second class ...	1,700	1,300
Superintending Engineer, first class ...	2,000	1,600

The number of Superintending Engineers in each class should be the same, and it would be a mistake to extend the system of annual increments to the administrative rank.

(5) The present division of the rank of Chief Engineer into two classes and the variation of local allowances as Secretary to a Local Government give rise to the anomaly that a Chief Engineer may be drawing less emoluments than a Chief Engineer junior to him in service in another Province, although the work and responsibilities attached to such posts are similar. Promotion to Chief Engineer, first class, becomes so badly blocked at present that many deserving officers never obtain a chance of promotion to the

higher rate of pay, or if they do so, only for a comparatively short time previous to retirement.

Considering that the numbers of Chief Engineer-ships throughout India is small and that with the exception of the posts of Secretary to the Government of India in the Public Works Department and of Inspector-General of Irrigation these are the only highly paid posts to which an officer of the Public Works Department can hope to attain, there should be only one class of Chief Engineer, and the salary attached to that appointment should be Rs. 3,000 per mensem.

For similar reasons and because the appointment as Secretary to the Government of India in the Public Works Department is invariably held by an officer specially selected from among Chief Engineers, the pay of that appointment should be Rs. 4,000 per mensem.

(6) A hardship which is peculiarly felt in Calcutta by officers who may be appointed to hold posts with headquarters at Calcutta is that no local allowances are attached to these posts. The Calcutta house allowance scheme only benefits the married man and then only when his wife or child is actually with him. Should his wife be obliged to go to England for reasons of health, the officer loses his allowance at a time when the allowance is actually worth more than if his wife were with him in Calcutta. The cost of living in Calcutta is well known to be very heavy, and an allowance of Rs. 200 per mensem to Executive and Superintending Engineers and of Rs. 150 per mensem to Assistant Engineers who have their headquarters at Calcutta should be granted and the house allowance under existing rules abolished.

71,832. (V.) **Conditions of Leave.**—*Furlough.*—The amount of leave which Imperial officers of the Public Works Department appointed in England can earn is sufficient. The rules governing the grant of furlough are practically identical with those which apply to the Indian Civil Service and Military officers subject to Civil leave rules, except in the most important particular of leave allowances. In the case of officers of the Indian Civil Service and Military officers subject to civil leave rules, furlough allowances are subject, if paid at the Home Treasury, to a minimum limit of £500 per annum, or the salary last drawn, whichever is less, and to a maximum limit of £1,000 per annum; whereas for Civil Engineer officers of the Public Works Department there is no minimum limit, and the maximum has been fixed at £800 per annum.

As long ago as 1870, in Despatch No. 43 P.W., dated the 28th March, the Government of India said:—“Section 16.—With reference to paragraph 4 of Your Grace's Despatch under reply we may remark

On this point we only add that we shall be glad to see some plan adopted by which the furlough allowances of Civil Engineers shall be equalised with those of Military officers in the Public Works Department and, so far as practicable, the advantage of pension also.”

It is however a fact that at the present day a Royal Engineer officer of the Public Works Department, with eight years' service to his credit, is entitled to nearly double the furlough allowances of a Civil Engineer officer doing exactly the same class of work and have the same service in the department.

A Civil Engineer is obliged to complete 18 years' service before he can claim an allowance approaching that which a Royal Engineer is entitled to after 8 years' service.

The present furlough allowances are so inadequate that a large majority of officers cannot avail themselves of the furlough due to them, even though the state of their health urgently demands that they should do so.

The question of leave allowances is raised in the last paragraph of the memorials recently submitted by officers of the Public Works Department. The reply given by Government of India was that “Pensions and leave are subjects of reference to the Public Services Commission; and as no doubt the Commission will enquire into these matters and submit recommendations, the Government of India consider that no useful purpose will be served by considering the prayers of the memorialists at this stage.” In

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these circumstances it is confidently hoped that the Royal Commission will be able to recommend that the leave allowances sanctioned for officers of the Indian Civil Service and for Military officers subject to the Civil leave rules will be made applicable to Civil Engineer officers of the Public Works Department.

(2) *Grant of furlough.*—The proposals for simplifying the rules in the Civil Service Regulations regarding the combination of various kinds of leave, as well as the leave rules for the European services which the Government of India have had under their consideration and which were sent to the Government of Bengal with Government of India, Finance Department letter No. 538 C.S.R., dated the 18th September 1912, for an expression of opinion, may be given effect to.

(3) *Privilege Leave.*—Under the present rules an officer can earn privilege leave to the extent of one calendar month for every eleven complete calendar months of duty, and such leave is cumulative up to a period of three months. In the case of officers who have accumulated the full period, it frequently happens that the exigencies of the public service prevent them being granted privilege leave when they desire it, and this leads to the leave lapsing through no fault of their own. It would in a measure mitigate against this loss of leave on full pay which an officer has fairly earned, if the cumulative period were extended from three to six months.

An officer should be allowed to avail himself of all privilege leave due to him immediately prior to retirement, and be permitted to retire from the service at the end of his leave, without having to return to duty, as he is now obliged to do. This concession has already been made where privilege leave is combined with other leave.

(4) *Study Leave.*—Modern Civil Engineering is a highly specialized profession and progress in the methods of construction is very rapid. Engineers can only keep themselves abreast of modern engineering practice by visiting and studying works of special interest in progress in different parts of the world. The majority of Civil Engineers serving in the Public Works Department who wish to visit works have to do so as private individuals and entirely at their own expense unless they are placed on deputation, or are specially permitted to visit certain works when on leave. In the latter case certain travelling and other expenses are allowed, but the time spent in the visits counts against the officer's period of leave. It is to the interest of the Government of India to encourage officers to visit such works, and rules should be introduced to admit of facilities being granted or that there should be a much more liberal interpretation of the present rules regarding placing an officer on deputation. In the Indian Medical Service study leave is granted in England up to one year out of total service in addition to furlough, and during this period he receives furlough pay and lodging allowance.

71,833. (VI.) **Conditions of Pension.**—The greatest grievance of Civil Engineer officers of the department and one which is severely felt is the inadequate retiring pension to which they become entitled under existing rules. Many efforts have been made, spread over a period of 40 years or more, to obtain amelioration in this respect, but the net result has been that the present pensions are actually less than they were 40 years ago, when the qualifications demanded from men joining the service were not as high as they are now and when the cost of living was considerably less. Numerous memorials on this subject have been submitted since 1907, and the reply of the Government of India to these memorials is contained in their letter No. 942E, dated 30th August 1912: “That no decision could be arrived at pending the receipt of the report of the Royal Commission on the Public Services in India.” It is therefore to the Royal Commission that the Civil Engineer officers now look for redress of this long standing grievance, and it is strongly and respectfully urged that the scale of pensions prayed for in the memorials of 1912-13 be recommended.

(2) This grievance concerning pensions was brought prominently to the notice of the Government of India

in the memorials of 1907-08, to which no reply was vouchsafed until August 1912; and as in the meantime a number of officers affected have been placed on the retired list, and many more will probably be required to retire before a decision is arrived at, any improvements made in the scale of pensions should have retrospective effect, at least from 1908.

(3) *Invalid pensions.*—Prior to 1884 invalid pensions granted to Civil Engineer officers on the Imperial list were governed by article 474 of the Civil Service Regulations, which also governs the pensions of all officers of the uncovenanted services as then termed.

In Lord Kimberley's Despatch of 1883 a new scale was introduced for Imperial Engineers and Telegraph officers with a view to ameliorating their conditions of service; this scale is covered by article 611 of the Civil Service Regulations. Under this article the scale has been increased from $\frac{1}{10}$ ths of average salary for ten years' completed service, $\frac{1}{10}$ ths for eleven years and so on to $\frac{1}{10}$ ths for ten years, $\frac{1}{10}$ ths for eleven years and so on, but at the same time the maximum limits have been reduced from those allowed by article 474. It is urged that article 611 should be revised so that the maxima limits may agree with those allowed by article 474.

(4) Unlike the Indian Civil Service and the Military Services in India, there is no official Family Pension Fund for the Public Works Department. The emoluments of officers in the department are not sufficient to admit of their making adequate provision for their families should they die in harness; this is a constant source of anxiety to many officers, and they have the additional anxiety of knowing that their pensions are purely personal and cease with their death.

It is strongly urged that a family pension scheme should be started; the majority of men would be willing to contribute a percentage of their salaries towards such a pension fund. Pension has been officially defined as deferred remuneration, which means that a certain portion of the salary which would have been paid to an officer, had there been no pension attached to his appointment, is kept back to provide for a pension on his retirement. This view is corroborated by the fact that when an officer is transferred on foreign service he is made to contribute towards the cost of his pension at the rate of one-sixth of the pay he would have received had he remained in the service of the Government of India. It may be presumed, therefore, that an officer only receives six-sevenths of the pay he would have received had there been no pension to provide for, and that one-seventh is kept back by Government as an officer's contribution towards his pension fund. If the officer had the option of investing this amount to provide for an annuity with a private Insurance Company, he could probably so arrange the terms that a portion of his annuity would be assured to his widow or other members of his family should his death take place within a certain number of years from the date his annuity fell due, with the additional security that his family would be covered against the risk of his death should it take place during the time he was subscribing to his annuity, on the guarantee of a considerable sum of money.

If some such scheme could be worked out by Government on an actuarial basis a large number of officers not only in the Public Works Department but in other services similarly unprotected would be glad to avail themselves of it and to subscribe towards the extra cost.

(5) There should be one set of leave and pension rules for all Civil Engineer officers on the Imperial list recruited under the present regulations.

71,834. (VII.) **Such limitations as may exist in the Employment of Non-Europeans and the working of the existing system of division of Services into Imperial and Provincial.**—It is felt that the European element must largely preponderate to admit of a high standard of efficiency; the number of appointments to the Imperial Service which may at the present time be reserved for Indians is 10 per cent.; this number should, it is considered, not be exceeded at present.

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(2) In the interests of efficiency it is felt that the proportion of Imperial Engineers in the service should for the present be not less than 66 per cent.

(3) It is agreed that Engineers of the Imperial and Provincial Services should be borne on the same list, but it is felt that the principle laid down in Article 85 of the Civil Service Regulations is fair and equitable, i.e., that an officer serving in his native land should get only two-thirds of the pay he would draw when working outside his native land. It is an economic fact that imported labour has invariably to be paid more highly than home labour, and there is no reason why India should pay the same for her home-born Engineers as the Secretary of State has to offer to the pick of English Engineers in order to induce them to serve in a foreign and distant clime.

The Englishman serving in India is not working under the same condition as the Indian, inasmuch as he cannot live so cheaply, and is exposed to adverse climatic conditions. He has also to bear the expense of long and expensive journeys home periodically for himself and for his family. Education of his family in England costs considerably more than education in India.

The scale of pay laid down for the Provincial Service is undoubtedly sufficient for the pure Indian, and certainly attracts Indians of high attainments.

Mr. F. A. A. COWLEY called and examined.

71,837. (Chairman.) The witness said he was a Superintending Engineer in Bengal, and that this was his 24th year of service. He represented the whole of the European Imperial Engineers in Bengal, and the views in the written statement expressed the opinions of his colleagues.

71,838. The present system of recruitment to the Imperial Service was generally satisfactory, and recruitment should be limited to candidates who had resided at least five years in Europe; but he did not suggest the five years' limitation for the purpose of disqualifying Indians from recruitment in England, because he believed that some Indians who went to England stayed more than five years at the present time. Five years was the lowest period, as the general education would take up one year, three years would be spent at an Engineering College, and one year at practical work. He had no knowledge whether all the Indians now recruited by the Secretary of State had resided in England for five years, but thought the majority of them had not.

71,839. If the present mandatory rule of 10 per cent. for recruitment in England was retained with the limitation he had suggested, he thought in future there would be a chance of obtaining more efficient Indians than were obtained at present. In the course of time more Indians would go to England for their education, and go for longer periods. The Institution of Civil Engineers had laid down a certain minimum which they considered necessary for the technical education of an Engineer, and that minimum was considerably over five years. Three years at a college and one year's practical training were essential. The ordinary Indian's primary education had not been up to the standard of the British school boy, and therefore he required a certain amount of general education before his Engineering College training. He laid importance on candidates possessing degrees recognised by the Institution of Civil Engineers as qualifying for their Associate Membership. At the present time in Bengal there were very few who were A.M.Inst.C.E.'s, and he wanted them all to have the Associate Membership.

71,840. The general idea in the service was that competition would be effective if combined with selection. He was against probation for Imperial Engineers in India, but insisted on a year's practical training in Europe in that branch of engineering which the recruit took an interest in. A man who was fond of mechanical work should go to workshops, one fond of civil engineering should be employed on drainage-works or water-works, and an officer whose bent was building work should be placed under building contractors. He would ask the men to carry out their work in India as they had seen it carried out by contractors at home, subject to the modifications due

71,835. (VIII.) Relationship to the Indian Civil and other Services.—The relationship as existing between the Public Works Department and other services in India is satisfactory and should remain unaltered.

71,836. (IX.) Any other points within the Terms of Reference to the Royal Commission not covered by the preceding Head.—*Travelling Allowance.*—It is desired to bring to the notice of the Commission the inadequacy of the existing travelling allowance rules in the cases of transfers. It is believed that this question was under the consideration of the Government of India some seven years ago, and would suggest that the question be again considered with a view to the present rules being made more liberal.

General Provident Fund.—The interest on account of a deceased depositor ceases from the date of tender of payment to the person legally entitled to receive the balance at credit of the account. It frequently happens that from inexperience and other causes it is inconvenient to draw the amount immediately on tender of payment being made. It is therefore suggested that it should be permissible for the balance at credit of the account to remain for a reasonable period after tender of payment has been made and to continue to draw interest during that period.

to local conditions. The year's training should be given to them before selection.

71,841. He favoured a central college in India in order that candidates for the Provincial Service might be trained in this country. They were now trained at Sibpur in the same class as subordinates, and that he regarded as objectionable. For the Provincial Service the candidates should be selected for the college and a qualifying examination should be held. In his written statement he had said that selection should be followed by a competitive examination, but he preferred to substitute for that a qualifying examination. A man would have to satisfy the examiners that he was sufficiently educated to undergo the training given in the college. If there were 50 candidates for 30 appointments the qualifying examination would simply mean that the first 30 men selected would go into the college. It was really competition combined with selection, but he would not make the examination a hard one. Each province would have its own candidates, the college being merely centralised for purposes of economy and efficiency.

71,842. He had no objection to abolishing the titles of Imperial and Provincial, provided the pay of officers was proportionately raised.

71,843. The witness agreed that a foreign service allowance was necessary for Europeans serving in India, but did not admit that this was the only reason for increased pay. A public school education in England followed by a university or college education gave a greater guarantee of obtaining men of character, with administrative integrity and ability and moral courage, than was obtained by the present system of education in India. Therefore the Government obtained a better bargain in the first instance. He would make no distinction whatever between one race and another; if an Indian had had a form of training which produced the necessary qualities he should be eligible for the higher pay. He did not agree with the principle that assuming equality of efficiency the European serving in India should be allowed something of the nature of a foreign allowance on account of the fact that he was serving outside his own country. The pay should be the same for the Imperial Engineer whether Indian or European.

71,844. Some sort of family pension fund should be established which would be acceptable to Government officers. He himself desired to have a family pension fund with a contribution and guarantee from Government in addition to the existing pension fund. He saw no reason why a man should not submit to a compulsory deduction of a percentage of his pay towards the fund. He did not want Government to subsidise the provident fund, which should remain as at present. A man now put so much of his pay into the provident fund and Government gave him 4 per cent.

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compound interest on the money. His own proposal was that in addition there should be a family pension fund, such as that in the Indian Civil Service, worked out on an actuarial basis, in order to enable men to make the necessary provision for their wives and families. The provident fund was only a slightly better investment than Government paper.

71,845. Under the present system of salaries and pensions 20 years' service was not too short for optional retirement, and there would be great resentment in the department if the 20 years' rule was abolished. The pension at 25 or 30 years was so low that it was sometimes not worth a man's while to stay on to obtain the small addition to what he would get after 20 years' service. He did not think the 20 years' rule had a tendency to induce the most capable men to leave the service, because men became so wrapped up in their work that often they did not want to leave it. It afforded an opening, however, for a good man to leave, and that no doubt was injurious to the service. He would rather see greater advantages offered to officers to induce them to stay on for the full time.

71,846. (Sir Murray Hammick.) The witness said he might have applied to become an Associate Member of the Institution of Civil Engineers at the age of 20, when at Coopers Hill, without passing any further examinations.

71,847. With regard to paragraph 71,831 (5) of his statement, the witness said that in Bengal there were two Chief engineers, and he did not see how it was possible to differentiate between their responsibility or their work. The sole difference was that one was a junior man and the other a senior man, and he urged that the number of appointments was so small that the pay should be the same.

71,848. An officer only received at present six-sevenths of the pay he would receive were there no pension to provide for, and Government therefore was retaining one-seventh of his pay. The officers were willing to subscribe any reasonable sum the Government of India asked them to subscribe to a family pension fund. The pension now died with the officer, and therefore Government should contribute something towards the widows and families; and he asked that Government should contribute to the family pension fund as they now contributed towards the Indian Civil Service Fund. He would be perfectly willing to see Government do away with the provident fund and substitute for it a family pension fund, but the retention of the provident fund was not much of a charge on Government. The officers wanted some form of family pension fund whether a contribution was made by Government or not. He would like to see a family pension fund in addition to the present provident fund.

71,849. (Mr. Abdur Rahim.) If every candidate for admission to the Imperial Service had passed the examination of the Institution of Civil Engineers or held a diploma carrying the privilege of exemption to that examination, it would prevent influence from outweighing other considerations in selection, and would equalise the provisional qualifications required. It was a fact that some diplomas of the English colleges were much more easily obtained than others.

71,850. High engineering skill was not required to maintain a building or a road, but he was not prepared to admit that there were a good many sub-divisional charges in which only that kind of work was performed.

71,851. (Mr. Madge.) He saw no objection to placing the key to the door of a public service in the hands of a body like the Institution of Civil Engineers.

71,852. If a temporary Engineer of 35 years of age was brought permanently into the department, he would block promotion and this would create discontent.

71,853. Officers had occasionally asked for permission to visit works, but he did not think any memorial had been placed before Government on the subject of study leave.

71,854. Members of the service would be quite willing to see any deserving officer promoted to any rank for which he was qualified. In Bengal there

was no feeling that only European officers of a certain standing should be promoted to high administrative rank.

71,855. (Mr. Macdonald.) The witness said that supposing it was decided to dispense with the services of every member of the higher ranks of the engineering staff who was not an Associate of the Institution of Civil Engineers, practically all the Engineers would be affected in Bengal. There was not a single European amongst them who was not qualified at the time of passing out of Coopers Hill to become an Associate Member without further examination, had formal application been made to the Institution. Therefore, the effect of carrying out the proposal would in a great many cases be purely formal.

71,856. Pay in the public services should depend both upon training and upon work. When appointments were originally made, it was impossible to say whether a man was going to turn out an extraordinarily good Engineer or a very bad one; but the English public school and university and college training was such as to give greater guarantees that a man would turn out well, and therefore to some extent the pay ought to depend upon training. On the whole he thought the average English-recruited Engineer was slightly superior to the Indian-recruited Engineer, the technical education in England being on a higher scale. He had not had experience of picked Rurki men, but had had experience of men who had failed to obtain Government appointments.

71,857. (Mr. Fisher.) A man who had taken a first-class in the mechanical science tripos at Cambridge would have passed an examination which, though not identical with the examination for the Associate Membership, would be accepted by the Council of Civil Engineers as equivalent, and certainly such a man should be employed in the service. He wanted some assurance that only men were admitted who passed examinations which would be regarded by the Council as equivalent, because his information was that all the degrees referred to in the regulations did not carry with them the privilege of exemption from examination for admission to Associate Membership. The clause at the end of the list of degrees,—"any other degree of a University in the United Kingdom which may hereafter be recognised by the Council of the Institution of Civil Engineers as exempting from passing for Associate Members"—certainly seemed to imply that all the degrees were accepted; but his information was that that was not correct. To become an Associate Member a man must not only have passed the examination for the Associateship, or an examination recognised as equivalent, but must have also had some experience of practical work. In his time that rule did not apply. He admitted that the insistence on the Associate Membership as such might bar the selection of a very brilliant man who has obtained the highest Engineering honours at a university and might also bar a very brilliant young Indian student. He had not said, however, that all officers should be Associate Members but that only degrees recognised by the Institution of Civil Engineers as qualifying for Associate Membership should be accepted.

71,858. (Lord Ronaldshay.) The witness said that the system of annual increments should not extend to the administrative ranks, because when a man had reached administrative rank he required a certain substantial promotion, as his responsibilities were trebled or quadrupled.

71,859. (Mr. Green.) The point he wished to make was that Engineers ought to have a family pension fund which was guaranteed by Government. The Uncovenanted Service Family Pension Fund is not so guaranteed.

71,860. (Shashi Bhushan Mazumdar.) The witness did not consider that the fact that practical work in England was carried out by contracting firms by means of labour-saving appliances at all militated against an English training, because labour-saving appliances were being introduced into India at a very rapid rate.

71,861. He did not propose the same responsibilities and the same standard of education for Imperial and Provincial Engineers.

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71,862. Privilege leave might be taken without limit, and the same rules should be applicable to Indians and to Europeans.

71,863. The witness said he was fully aware of the heavy expenses entailed upon Indian officers by the family system. He was not aware that Provincial Engineers were frequently earning much less than some of their junior class fellows who entered other departments. His only experience was that of an Executive Engineer and a Collector of a district, and, in that case the Executive Engineer was drawing

(The witness withdrew.)

SHAILENDRA NATH BANARJI, Esq., Under-Secretary to the Government of Bengal in the Irrigation and Railway Branches.

Written Statement relating to the Public Works Department.

71,866. Referring to the statement by the Indian-trained officers of Bengal dated 2nd April 1913, a copy of which is attached hereto (Annexure A, paragraphs 71,874-80), I generally agree with its conclusions. But I would venture to put forward a few personal opinions on the several points raised.

71,867. (I.) **Method of Recruitment.**—The existing method is described in the statement referred to above.

Imperial Service.—I do not consider the present method of recruitment as satisfactory as it used to be before the abolition of the Cooper's Hill College. It is very probable that present recruits from English Colleges get higher training in the mechanical branch of Engineering and are afforded better facilities of seeing extensive engineering works, but the standard of training in Indian Colleges appears to me more suited to what is required of Engineers in the Public Works Department in India. It may be urged that for works requiring special engineering skill, like the construction of the Lower Ganges bridge, the services of specially trained men in English Colleges are required, but it is open to doubt whether for running the formulated routine of the Public Works Department, men with special branches of engineering training are at all indispensable.

I am of opinion that for recruitment from England the present system of selection should be supplemented by a competitive examination between the nominated candidates, this examination being on the lines as suggested later on for the selection of superior engineer officers from India.

Provincial Service.—The present method appears defective for the following reasons:—

(i) Want of open competition from students all over India.

(ii) Want of special training to qualify the candidates for the particular duties they have to discharge in service.

(iii) An uniform method of training to turn out officers and subordinate classes. This is a very serious drawback.

My suggestions for improvement would be as follows:—

(1) Indian Engineering Colleges should have a theoretical and practical course extending over three years to be terminated by a final University examination. The result of this examination will qualify men for the so-called Provincial Service, members of which are proposed to be designated Deputy Engineers (*vide* Annexure A) after one year's practical training.

(2) Out of these passed students a number equivalent to double the number of requirements in the Superior Engineer Service (proposed to be designated "Indian Engineer Service") for the particular year, should be picked up and given a further training of two years in a Central College for all India. The appointment in the Superior Engineer Service should then be made as a result of competition in the final examination of this College. The men so appointed should not require any probationary period, but will have to pass the prescribed Departmental examination within three years of their appointment.

Those who fail to compete in the examination mentioned above should be given preference in appoint-

more pay than the Collector. But in this instance the Executive Engineer, although an Indian-trained officer, was an Imperial Engineer.

71,864. There were heavy divisions in Bengal for which European Engineers were more fit, but he did not think it possible to redistribute the divisions so as to make them practically equal. The work to be done in them varied from year to year, one year being light and another year heavy.

71,865. The present scale of travelling allowances on transfer was a crying injustice.

ments in the District Boards, Municipalities and guaranteed Railways.

Regarding the percentage of appointments in the Superior Engineer Service from English and Indian recruits, I would urge that 50 per cent. of the appointments should be from India, and the proportions should gradually increase as conditions change. The Commission of 1886 was appointed to devise a scheme for doing full justice to the claims of natives of India to higher and more extensive employment in the public service. The Government of India have always held that it is necessary to throw open a larger number of appointments to Indians in order to redeem to the utmost extent the pledges of the British Government to employ natives in the several departments in the service of the State. The outcome of the recommendation of the Commission was quite the reverse, and the number, pay and prospects of the higher Engineering appointments were substantially reduced instead of being increased as was anticipated. A retrograde policy like this may be guarded against.

71,868. (II.) **System of Training and Probation.**—This has already been dealt within paragraph 71,867. I would now like to add the following. One year's probationary period in England to qualify for the superior Engineer Service has been suggested in the memorandum by the Indian-trained Engineers of Bengal. But I am doubtful whether this is indispensable. Although caste prejudices in this country are gradually but very slowly dying away, it would be a considerably long period before the shackles are entirely cast off. And I am sure that the idea of a voyage to England will seriously hamper the progress of a very intelligent section of orthodox Indians in their attempt to achieve an Engineering career in the service of Government, and perhaps the State will lose some very capable Engineers of talent owing to this barrier being put in.

71,869. (III.) **Conditions of Service.**—I fully agree with the observations made under this sub-head in the memorandum attached (paragraph 71,876).

71,870. (IV.) and (V.) **Conditions of Salary and Leave.**—I have no fresh observations to make except what I said about leave in my memorandum dated 20th February 1913 (Annexure B—paragraph 71,883).

71,871. (VI.) **Conditions of Pension.**—I would add the following. With the reorganisation of pay and prospects of every branch of service, the Exchange Compensation allowances have ceased. But these allowances in case of pensions drawn have not been discontinued in the case of European officers, thus giving them a higher rate of pension than drawn by an Indian officer for the same amount. There ought to be uniformity in this.

I do not agree to any difference being made in the scale of pension drawn as suggested in paragraph 71,879, and would urge that it should be the same for European and Indian.

71,872. (VII.) **Such limitations as may exist in the Employment of Non-Europeans and the working of the existing system of division of Services into Imperial and Provincial.**—I fully concur with the observations made in the memorandum attached. I would, however, add the following. As urged before, the department should be recruited half from England and half from India. In both these cases, the recruitments should be open to all British subjects equally, irrespective of domicile, caste, colour or creed.

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The division of the Public Works Department into Imperial and Provincial sections has been anything but a success, and has created constant heart-burning among the Provincial officers, who do exactly the same work and bear precisely the same responsibilities as their Imperial brothers. This is not at all analogous to the Civil Service, where the Imperial and Provincial people have altogether different duties to perform. This division of services in the Public Works Department has intensely been resented, and has already resulted in splitting up the whole Public Works Department into two hostile camps, and this must greatly injure efficiency.

It is only proper and just that same value has to be paid for the same type of work, and it should be no consideration that a certain class of workmen may have greater individual needs. The remuneration of the Justices of the High Court and Members of the Executive Council of His Excellency the Governor afford excellent examples of the spirit of Government in this matter. Again, there are examples of English-trained Engineers who, article for article, compare unfavourably with the average Indian-trained Engineers in the matter of efficiency. It is, therefore, urged that the differentiation which is illogical and unjust should be obliterated and extinguished and that the Indian Colleges should be restored to the position they formerly occupied when the training imparted in them was as fruitful as to turn out half a dozen of Chief Engineers and several administrative officers.

71,873. (VIII.) **Relations of the Service with the Indian Civil Service and other Services.**—I am not quite sure whether the relations between the Public Works Department and the Civil Service do not admit of improvements. As an Indian member of the former service I can say this much from personal experience.

It would, I think, not be out of place to mention here that I have had occasion to feel the want of proper recognition by the Civil officers.

ANNEXURE A.

Memorandum dated the 2nd April 1913, by the Indian-trained Engineer Officers of Bengal.

71,874. (I.) **Methods of Recruitment.**—In Bengal the system of recruitment of Indians and Indian-trained Engineers is as below:—

A.—**Imperial Engineers.**—Indians appointed by the Secretary of State by nomination from England beginning on Rs. 380 and on the same conditions as Europeans except leave and pension rules. The maximum number of Indians so appointed is limited to 10 per cent. of the total number of appointments made by the Secretary of State. The numbers of officers so appointed in Bengal and the three other Provinces of Bihar and Orissa, Assam and Burma, since the rules came into operation five years ago, compared with the total of officers so appointed, are—

	Number of Indians.	Total number of officers appointed.
Bengal	Nil	9
Bihar and Orissa ...	1	7
Assam	1	5
Burma	Nil	19
Total	2	40

The statement shows that only 5 per cent. has been appointed, though the permissible limit, 10 per cent., in itself was small enough. The number of Indians appointed by the Secretary of State was small enough. The number of Indians appointed by the Secretary of State should be increased, and the limitation of 10 per cent. is too small and it should be raised to 50 per cent. The method of selection of candidates by nomination is not considered satisfactory. Selections should be made by an open competitive examination as in the case of the Indian Civil Service.

B.—**Provincial Engineers.**—(1) One appointment every year from the Silpur College. This selection is made from Engineering graduates of the Calcutta

University. After graduating, the candidate undergoes a year's practical training in the Department and a second year's apprenticeship and is then appointed on Rs. 250.

(2) One in alternate years selected from deserving upper subordinates. The Provincial Service was introduced to throw open a larger number of the less important appointments to Indians as recommended by the Public Service Commission of 1886. The exact way in which this will be effected was not noted, but it appears that it was probable that the intention of the Commission was to introduce a Provincial Engineer Service analogous to the Provincial Civil Service. The Service introduced is quite different. The Provincial Engineers serve side by side with Imperial Engineers with the same responsible duties, except that the pay is less. This system has created great dissatisfaction, particularly at the present time, when the conditions of education in India and in England are equal, the advantage in favour of European education referred to in 1886 having disappeared now. A comparison of the syllabus of study undergone by the Calcutta graduate will show his advantage over the candidates eligible for nomination for the Secretary of State's appointments, except that the after-College training in certain branches in England is superior, the opportunities of studying Engineering works of higher order being greater. The efficiency of the Indian training is also proved by the fact that just at present three of the ablest Chief Engineers are from Indian Colleges. It is, therefore, urged that all appointments to the superior Engineering Service should be on the same pay, whether appointed in England or in India, and the Provincial Service abolished. It has been felt by the existing Provincial Engineers that from the small pay it is difficult for them to maintain their position in society commensurate with their rank. In the Indian Civil Service the pay is high and a Statutory Service 3rd pay was possible, but the pay of Engineers being much smaller, a reduction of 3rd of pay slices off funds for necessities.

Coming next to the question of the number of Indians appointed, it will be seen that in 1886 the cadre of Engineers was—

India	834
Madras	87
Bombay	94
Total	1,015

Barring special appointments, it was then calculated that 30 Engineers' appointments will be necessary. The Government of India decided that these 30 appointments should be allotted to—

Royal Engineers	6
Cooper's Hill Engineers ...	15
Indian College Engineers ...	9
Total	30

That is to provide ultimately $\frac{3}{10} \times 1,015$ or 303 Indian-trained Engineers. The cadre has increased since 1886, and the rules for recruitment have been in operation for 27 years, but the number of appointments of Indian Engineers is now only about 250, which shows that in this case also the permissible minimum has not been worked up to. The number of Royal Engineers recruited have been reduced and Cooper's Hill College abolished; at the same time training in India has improved. It is, therefore, very desirable that a larger percentage of appointments be thrown open to Indian-trained Engineers than in the past. The number we propose are based on the following rough figures. The cadre of regular Engineers is now assumed to be 1,050. This number should be reduced to, say, 1,000 by a redistribution of charges which can be effected if all the subdivisions are manned by graduate Engineers (trained in Indian State Colleges) of the Deputy Engineer class which we propose later on. The Executive Engineers will be relieved of going into minute details which they have to do now in case where a less qualified man is in charge, as it is in some cases at present, and their jurisdiction can then be increased. Of the remaining 1,000 appointments, 100 of the less important charges

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may be listed for deserving members of the proposed Deputy Engineer class, the balance of 900 to be regular Engineers of the superior service. It would be fair to reserve 50 per cent. of these appointments for Indian-trained Engineers, this being on the basis of redistribution which was the intention of the Government of India, except that the number allotted for Royal Engineers, who are not appointed now, being given to Indian College students, the number being 9+6 or 15 out of a total of 30 annual appointments. This would mean 450 appointments for Indian College men, and for this ultimate number $450 \times \frac{3}{4}$ or 17 appointments will be thrown open to them annually. The number may be distributed as below :—

Bengal (Sibpur College)	4	(Provinces of Bengal, Assam, Bihar and Orissa and Burma.)
Bombay (Poona College)	3	Bombay.
Madras (Madras Engineering College.)	3	Madras.
Punjab (Rurki)...	4	(United Provinces, Central Provinces, Punjab and Railways.)

The remaining three will be reserved for promotion from the proposed Deputy Engineer service. These three total service appointments will afford six appointments being made, as officers will only be selected at about the 16th year of their service, when they have proved their exceptional abilities. These six appointments may be distributed as under :—

Bengal	...	...	1
Bombay	...	...	1
Madras	...	...	1
Punjab and United Provinces	...	...	1
Bihar and Orissa and Assam	...	...	1
Burma and Central Provinces	...	...	1

Total 6

A saving in establishment charges will thus be effected by a reduction of 15 per cent. of the superior appointments, replacing them by Deputy Engineers on a smaller pay. A saving will also be effected by the replacement of a number of Europeans by Indians in the superior service, on account of the comparatively stringent leave and pension rules and allowances of the latter class. The maintenance of a large European element in the Technical Departments (such as Public Works, Railway, Forest, Telegraph, Medical, etc.) is not demanded for political considerations. In the Medical and other services it has been urged that a war reserve is necessary and Europeans cannot be replaced. In the Public Works Department this even is not necessary, and it is therefore the only department in which a large number of Indians may be appointed without loss of efficiency, and we therefore strongly urge that a substantial larger number of appointments be thrown open to Indians than hitherto.

The selection of this number of Indian-trained Engineers may be by a competitive examination, if possible. If not, these appointments will be made from the results of the final College tests.

The name of the service may in future be the "Indian Engineering Service."

Deputy Engineers.—The proposed class of Deputy Engineers should be recruited solely from passed students of the State-maintained Colleges and no promotion be made to this class from any section where the men are not highly qualified.

Overseers.—The recruitment to this proposed class to replace the lower subordinate class should be from candidates who have passed the Overseer examination of the Technical Board as far as available, the balance being taken up from candidates who have passed the Sub-Overseer's examination after they have completed their practical training.

71,875. (II.) System of Training and Probation.—Engineers.—The appointments for Indian Colleges will be on probation directly they graduate, candidates being selected in the order of merit in a competitive examination, or if that be not feasible, by the results of the final examination. One year's practical training in England would be desirable and

should be insisted on, and this would be in the probationary period. An allowance of £15 per month plus passage from and to India to be given to the probationer and he will be appointed as Assistant Engineer on Rs. 380 on production of a certificate of undergoing this practical training as in the case of Engineers appointed by the Secretary of State. No further departmental test should be made, as under the present system, which is undesirable as the higher qualifications are placed at a discount in the hurried test in minor and less important subjects. This is not the real guide to the test of an Engineer of higher qualifications. If necessary, further practical examinations may be introduced in the College course, though the latter, we presume, will not be necessary, as the University Act of 1904 now provides these, and candidates for 1912 onwards have passed through this standard.

The age at which a Sibpur College student now qualifies for service is very advanced. It is desirable to reduce this and we append a note to this memorandum showing what it works up to now and what we propose.

Deputy Engineers.—These officers should be appointed after undergoing a year's approved practical training in India, Public Works Department, after graduating. An allowance of Rs. 100 per month will be given to them during the probationary period, they being confirmed in the 6th grade at the end of this term. No difference in the scale of allowances should be made as at present between Europeans and Indians, as this distinction in the beginning of a young man's career has a very deleterious influence, creating a feeling of diffidence and inferiority. A further care is necessary to secure that they are not huddled up with the non-qualified Overseer passed students as at present. No further departmental test should be made for selection for the same reasons as given for Engineers.

Overseers.—The present system is satisfactory and should be maintained except that they should not be put in practical training together with the graduate students. Deserving senior Overseers will be promoted to the Deputy Engineer class on the supernumerary list with honorary rank.

71,876. (III.) Conditions of Service.—The superior Engineering service should be the same and no distinction made between Indians and Europeans. The existing Provincial Service should be abolished as already urged above.

For the larger number of highly qualified Engineering graduates turned out from the State Colleges, the introduction of a suitable service is necessary. At present those that fail to secure appointment as an Engineer are appointed as upper subordinates. The nomenclature is unhappy at present as the majority of these men are now graduates who have undergone a very complete and stiff course of study in a scientific subject. The last Public Service Commission recommended a Provincial Engineering service for less important posts. We presume the intention was to introduce a service which would be in its relation to the Engineer Service as the Provincial Civil Service is to the Indian Civil Service. This should be adopted and a Deputy Engineer Service introduced to replace the existing Upper Subordinate Service. The course of study undergone by an Engineering graduate is far more difficult and extends over a longer period than that of a candidate for the Provincial Civil Service. The status and pay of the Deputy Engineer Service should therefore be analogous to those of the Provincial Civil Service officers.

The existing lower subordinate class should be abolished for similar reasons, the course of study now undergone by them having been thoroughly improved. This class should be replaced by "Overseers" as proposed.

71,877. (IV.) Conditions of Salary.—For Engineer officers no difference; the pay as at present.

For Deputy Engineers to replace present upper subordinates, the service will be manned by Engineering graduates, who are highly qualified. The present ones have proved to be a very efficient set of officers who have raised the prestige of the service. The

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examination of the records of any office will show that the intricate calculations and estimates of important projects are mostly prepared by this section of useful Government servants. Their pay is, *prima facie*, inadequate and there is naturally a dissatisfaction. This has been recognised by Government, but the remedy proposed by some officers was worse than the disease. It was, that the College which turns out these highly qualified men be abolished. As Government does not and cannot accept this view, the College has to continue. It is necessary, therefore, to increase the pay and prospects of this body a little higher and we propose the following scale. The present rates of pay for this as also of the lower subordinate class was fixed long ago, and though the pay of the superior Engineers has been increased in the meantime, and stagnation of promotion removed, nothing has been done for this needy class :—

	Pay per month.	Percentage of appointments to total cadre.
	Rs.	
1st	500	20
2nd	400	20
3rd	300	15
4th	250	15
5th	200	15
6th	150	15

Of late graduates have not been eager to accept these appointments owing to rise in prices, which precludes anyone entering on the pay now offered, but with the increased pay as proposed they will be induced to do so. With these efficient and reliable officers of higher moral tone in charge of subdivisions, the Executive Engineer will find relief and be able in his turn to hold bigger charges. At present the promotion of upper subordinates is slow, and this has been further retarded by appointments from time to time of outsiders to the higher grades. This should be stopped, save in very exceptional cases.

One hundred listed appointments as Executive Engineers to be reserved for the senior Deputy Engineers, and six appointments made annually to the Indian Engineer Service from Deputy Engineers of proved ability.

Deputy Engineers in charge of subdivisions should be allowed rent-free quarters as in the case of Provincial Civil Service officers in charge of subdivisions.

Overseers.—This service is proposed to replace the present lower subordinate class as already noted above. The standard of education of subordinates employed has risen much higher since the service was introduced. The cost of living has increased in the meantime about 100 per cent. The Government of Bengal have considered the question of raising their pay, and in Bengal Government Resolution No. 1670 E., of the 30th May, 1910, a number of appointments as Overseer, 3rd grade, has been reserved for the students who have passed the Overseership examination of the Joint Technical Board. This has not been found to be a remedy, rather the reverse, as it has only created dissatisfaction amongst graduates with whom they are trained on equal terms and then examined in simple practical tests in minor subjects, simply because the Overseer students are innocent of the higher subjects. The bulk of the passed students has to enter on Rs. 40 and finish their career on Rs. 70 per month. The promotion is very slow. It is not possible to live on this pay at the prevailing high prices for a married subordinate, who has in a transferable service to live away from a cheap joint family, and also to do touring work entailing a double set of servants. It may be possible for a year or two to do so living without one's family with him, in fact leaving them to be maintained by other relatives, but this arrangement cannot continue for long. The result is that the honest and good leave the service, and the undesirable stick on. The temptations to a Public Works subordinate are as manifold as in the Police, and as has been accepted for the latter Department, the pay and prospects of the lower subordinate require an increase, if the moral tone is to be improved to the interests of Government. We would, therefore,

propose that the present lower subordinate establishment be replaced by "Overseers" and the pay fixed as below :—

	Proposed pay per month.	Percentage of appointments to total cadre.
	Rs.	
1st	100	10
2nd	85	15
3rd	70	15
4th	60	20
5th	55	20
6th	50	20

Two special increments of Rs. 10 each may be given to deserving men of the 1st grade.

Deserving subordinates of exceptional ability to be promoted to Deputy Engineer grade to the extent of 5 per cent. of the appointments of Deputy Engineers.

Free quarters should be provided to these officers, and where no Government quarters are provided, a suitable house-rent allowance to be given. At present free quarters are provided in many cases, and this proposal will not increase the cost much.

The conveyance allowance of the Upper and Lower Subordinate Services requires revision owing to enormous rise in wages and prices of food stuffs. Rupees 15 monthly for the upkeep of a pony, as now allowed, is insufficient.

The daily allowance of officers of the Engineer Department should be increased by 50 per cent.

71,878. (V.) Conditions of Leave.—For short leave and leave on urgent private affairs, the rules, which are the same in case of Europeans, are fair, but the latter leave may be granted to Indians in instalments. As regards furlough, the proposal now under consideration of the Government of India will suit, except that the proportion of furlough should be one-fifth of service as against one-fourth in case of Europeans to enable the full amount of five years' leave being enjoyed in a service of 30 years.

Study leave to Europe, Egypt and America should be allowed to Indians on favourable terms to encourage them to visit Engineering works in those countries. Such leave to be on three-fourths of pay, subject to a maximum of £40 per month and a minimum of £25 per month. It should preferably extend to four months at a time at intervals of not less than six years. Not more than two such leave should be allowed to an officer in his total service. A report of works visited by him to be furnished to Government.

The Department has been deprived of the privilege of leaving head-quarters on holidays under the Negotiable Instruments Act. This privilege should be allowed to officers of the Public Works Department as far as possible. Even the Magistrates and District Judges are allowed to go away during Christmas and Puja holidays, making temporary arrangements for urgent work, but the Public Works Department is the only Department from which the privilege has been withheld.

71,879. (VI.) Conditions of Pension.—Pension of Indian Engineers and subordinates to be on the same graduated scale as for European officers, except that the fraction in the case of Indians to be reduced to $\frac{2}{3}$ ths, etc., instead of $\frac{3}{4}$ ths, etc., as in the case of Europeans. The maximum limit of pension to be raised from Rs. 5,000 to Rs. 7,000 a year. Our reason for these suggestions are—

(1) The average life of Indians, particularly people of Bengal, is shorter than that of Europeans.

(2) Indian-trained Engineers, specially Sibpur College men, enter service at a more advanced age than Europeans. This is due to the inordinately long course of study which extends to five years after the intermediate Engineering examination.

(3) Indian service leave rules being stringent such officers have to stay on actual duty, foregoing the advantages of recouping their health.

(4) Long leave of Indian officers being usually spent in India, the service counting towards pension is much less than that for Europeans of the same record of service.

(5) Indian officers of the Engineer Service are fast adopting semi-European mode of living. This, com-

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bined with the demands of an Indian society, in the way of maintaining a large circle of relatives and to find funds for heavy marriage dowries for their children; these combined with the general higher standard of living, run up the total cost of keeping up appearances of a retired officer very high.

Article 649, Civil Service Regulations, regarding the retiring of an Executive Engineer at the age of 50, if he has not attained the rank of a Superintending Engineer, should be abolished, particularly in case of officers promoted from the Deputy Engineer grade.

71,880. (VII.) **Limitation for Employment of Indians.**—The maximum limit of 10 per cent. of appointments by the Secretary of State should be raised to 50 per cent. The low limit was put as it was anticipated that the Department will be swamped by Indians otherwise. Experience shows now that these apprehensions are groundless. About half the number of officers appointed from Indian Colleges, as shown in the Classified List, are Europeans. If the limit of Indians for Secretary of State's appointments is raised to 50, then there will be 50 per cent. of Indians from England and 50 per cent. in India. The number of Indians in the total list will not be therefore more than 50 per cent.

Indian graduates who have specially qualified in special branches of Engineering, such as Electrical and Mining, should be appointed in the Government departments where non-qualified Europeans are now employed. The Electrical Departments of the Local Governments now employ a good number of such officers.

Europeans, indifferently qualified, are employed on Railways in which Government can force a control as these Railways are guaranteed, and they should not employ non-qualified Europeans on a higher pay in preference to qualified Indians who are less costly. This requires the serious consideration of the Government of India as an army of Engineers may be suitably employed on Railways. Indian Engineers have proved their ability and usefulness in the Eastern Bengal State Railway.

For the Engineering Service, it is necessary that Government should make stringent rules for appointment of all the superior Engineers and subordinates in all District Boards and Municipalities, from qualified students of the State-maintained Colleges. Europeans who have qualified to any degree find ready employment in the guaranteed Railways and private Engineering firms which are now mostly owned by Europeans; it is, therefore, very necessary that qualified Indian students from Indian Colleges should receive preference in any department where Government has any hand in the selection. No Engineer's post on a pay of Rs. 200 or above in Bengal, Burma, Bihar and Orissa and Assam should be filled in unless he is an Engineering graduate of the Calcutta, Bombay, or Madras University or had passed the final Rurki Engineering Examination.

71,881. (VIII.) **Relations with the Civil Service.**—Only lately, with the creation of a Governorship in Bengal, the Engineering portfolio has been put in charge of a member of the Civil Service. The arrangement or disposal of business is not known to members of the Public Works Department, but they would suggest that the position of the professional head of the Department is made clear on the point of dealing with technical matters and works.

71,882. NOTE REFERRED TO IN ANNEXURE A.

From the Classified List it will be seen that Europeans were appointed at a much earlier age than those recruited from the Indian Colleges, thus a very valuable portion of the lives of the latter officers is spent in the Colleges as well as in training, which could be much better utilized in the service to the best interests of both the Government and the officers concerned. This is not due to any intellectual deficiency on the part of the Indian students, but to the standard required for admission into the Indian Engineering Colleges, as well as the lengthy periods of College course and practical training. A comparison of the systems that obtained in the late Coopers Hill College in England with that of the Sibpur Engineering College in Bengal will show clearly the vast difference

in the two systems. To enter Coopers Hill College a student is required to pass a preliminary test. He is then admitted into the College, and on passing the final examination after three years he is appointed to the Public Works Department, India, as Assistant Engineer on Rs. 380. If the students entered at 18 or 19, they got Government appointment generally at the age of 21 or 22. In Sibpur Engineering College in Bengal the minimum educational qualifications for admission as a regular student are that a candidate shall have passed (a) Intermediate Examination in Science or Arts of the Calcutta University in English, Mathematics, Physics or Chemistry and (b) pass such special test in drawing as may be prescribed from time to time by the Principal; such a candidate must be under 21 years of age. Under the present University Regulations, the minimum age of a student at the time of his admission into the College will be about 19 years. He enters College in the month of July. The College course is for four years with an intermediate University examination at the end of the second year.

The final B.E. Examination is usually held in July. Then the passed students commence a year's practical training under some Public Works Department Engineers some time in the following October. Then after completion of the year's training another examination is held at Purulia in the month of November, and the successful candidate is appointed as Apprentice Engineer in the Provincial Service, some time in January or February. Thus it will be seen that even a very meritorious student, who successfully passes every examination at the first chance, will take nearly six years from the date of entering the College to get an appointment in the Public Works Department, Bengal, as an Apprentice Engineer on Rs. 100. After the probationary period of one year as Apprentice Engineer he is promoted to the Assistant Engineers' grade on Rs. 250, if he succeeds in obtaining a favourable report from his Executive Engineer. The above will show how handicapped an Indian Engineer is, in his official career, compared with his European brother officer. The result is that an Indian Engineer commencing service at the age of 25 or 26 on the lowest pay of Rs. 100 becomes superannuated before his time comes for the higher administrative posts.

Thus it is clear that the fact that only a few Indian Engineers have been able to rise to the administrative rank during the last 50 years is not, in many cases, due to any fault of the officers, but to that of the system of recruitment. It is also disadvantageous to Government, as they get on an average of about 28 years' service from its Indian College Engineers against about 32 from Europeans. Besides, the Government takes Indian-trained men into its service, when a considerable portion of their energies was used up in passing a number of stiff and unnecessarily rigorous tests and examinations. It is, therefore, very necessary that the system of recruitment should be thoroughly changed and simplified according to that followed in Cooper's Hill for so many years with such good results. It would not be out of place here to mention that the rules framed for the proposed Dacca Engineering College in connection with the Dacca University Scheme will make matters much worse. The minimum educational qualification for admission is that the student must pass the I.Sc. Examination. Then the College course is for four years, and then practical training for three years. So a student will be about 27 before he can expect Government appointment.

We would therefore propose that age-limit for admission may be fixed at 19. The minimum educational qualification required for admission will be the passing of the Matriculation in the First Division. With better prospects for the passed students of the Engineering College, there will be a very large number of applications from very meritorious students for admission into the College and the Principal will be able to pick up the best students from the top of the list prepared according to their marks in Mathematics and half the number they obtained in English. Of course each student should produce a health certificate from the College Surgeon and a certificate of good character from the Head Master of his school.

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[Continued.]

The College course may advantageously be fixed for four years, during which the students should be given both theoretical and practical training in all the branches. The University examination that will be held at the end of the fourth year should also be both theoretical and practical. On the results of this examination, the appointments to the Public Works Department should be made without any further practical training or practical examination. We may also note that facilities should be afforded to the students while in the College to learn riding and cycling, and certificate from the Principal to the effect that the student can ride and cycle will be required before he is allowed to appear at the final examination at the end of the fourth year. The probationary year of the Indian College Engineers may advantageously be passed in England, where they can see large and important Engineering works. By the proposed system we are sure that the Government will find in these new recruits highly trained men both in theory and practice, full of youthful vigour and energy which, with a few years' experience and mature judgment, will make them very valuable and useful officers. These officers will be able to render useful service for a much longer period than at present.

ANNEXURE B.

71,883. Note by Mr. S. N. Banarji, Under-Secretary, Irrigation Branch, dated the 20th February 1913.

(1) I am not sure whether the proposed rules do not require much more simplification. These rules are to be applied by petty offices as well, and unless these are framed in the simplest manner possible, difficulties in application may occur.

(2) I would suggest that the amount of furlough earned be one-fifth of active service in order that the limitation to five years can be taken advantage of in a service of average length. Under the one-sixth proportion rule, an officer whose services will extend over a period of 35 years will be able to earn this. Under the rules for European services where the proportion is fixed at one-fourth and the total leave allowed is six years, an officer will be able to enjoy this maximum in a service of 30 years. To enable officers under Indian rules to avail themselves of the maximum of five years in their case in 30 years, the proportion of furlough would have to be put at one-

Mr. S. N. BANARJI called and examined.

71,884. (Chairman.) The witness said he occupied the position of Under-Secretary to Government in the Irrigation Branch and represented the Provincial Engineers of the Public Works Department in Bengal, 11 in all. He was recruited to the service nine years ago from the Sibpur College. He differed from his colleagues* with regard to certain points in the written statement.

71,885. He agreed that 50 per cent. of the superior service should be recruited in England and 50 per cent. in India, and he proposed the abolition of the distinction between Imperial and Provincial. The proposed Deputy Engineers should take the place of the present Upper Subordinate Service in the subdivisions. Officers of the superior service would fill some of the sub-divisions as Assistant Engineers. The number of Assistant Engineers would be fixed in accordance with the number of superior vacancies. There should be sufficient assistants in training for superior posts.

71,886. The witness did not agree with the written statement that the age for the admission of candidates to Engineering Colleges should be 19. He thought 17 would be the proper age for admission into an Engineering College. He was in favour of a central college, but desired to restrict it to men in training for the Imperial Service. For the proposed Deputy Engineer Service he suggested Provincial colleges in various provinces. Under his

* Colleagues here means and includes all the Indian college-trained Engineers of Bengal, in which there are a good many Imperial officers as well. The joint written statement was a result of their combined deliberation.

fifth of active service. This latter proportion, I would venture to submit, would be fair.

To simplify matters still more, I would suggest as an alternative one-sixth of total service (not active service). In case of Indian service rules, the term furlough "due" has not been defined. It is presumed that furlough "due" is furlough earned, deducted by ordinary furlough availed, except furlough on medical certificate under proposed Article 320a. This point may be made clear in the rules, as without this there may be a misapprehension that an officer who had the misfortune to be compelled to take leave on medical certificate at the earlier stage of his service will have to work off the leave taken from the furlough which he will earn from active service. I am confident that the intentions of the Government are not to withdraw former privileges, and have therefore mentioned this point with a view that the point may be made clear by a sub-clause. In India the bulk of the Government servants who draw less than Rs. 500 per month cannot afford to take long leave on half-pay and they avail themselves generally when they are incapacitated through ill-health. The provision of three years' sick leave allowable under the old rules, irrespective of the furlough earned, was necessary, and it is presumed that this privilege will not be withdrawn.

(3) If there is no objection, leave on urgent private affairs may be allowed to officers under Indian service leave rules in instalments instead of six months at a time. In case of European officers, the journey to England and back to Bombay takes up about five weeks and is an expensive one; a minimum of six months at a time is necessary in such a case. In case of Indian officers a shorter time will suffice, but being near at hand the occasions for such leave are more frequent. The privilege of taking the leave under proposed rule 321 in instalments will therefore be a great advantage. At the same time, the interests of the service will also be better protected in such a case, as an Indian officer will take the full period of six months if he knows he will not get the balance at a future period, though he may not usually require more than half of it, thus dislocating the work for a longer period, which will otherwise be avoided. Then, again, he may not avail himself of the balance due at all. In fact, it will be an inducement to officers not to take a larger length of leave on urgent private affairs than is urgently necessary.

scheme the course for the new class of Deputy Engineers would be three years and for the superior service five years.

71,887. He differed from the view held by his colleagues, because he was in favour of open competition throughout the country, so that men from all the provinces would have a chance of showing their abilities. In the central college there would be an open examination for all India, with no selection. Those who came out at the top of the list, irrespective of the provinces from which they came, should be given appointments in the various provinces. After the results were published an endeavour might be made to allot successful candidates to their own provinces, but if this was not possible he did not think it would matter very much, and it would not cause dissatisfaction if men of one province were appointed to another province. He was in favour of direct recruitment to the superior service, but would reserve a certain number of posts for promoted officers.

71,888. He did not agree that a year's training in England should be given to candidates recruited in India, as this would deter some people from entering the service. If it was decided that a year's training in England was necessary, he would not make it compulsory, but would arrange for it by means of study leave. For Indian engineering purposes there was not much to be gained by going to England.

71,889. He saw no reason for paying the European something in the nature of a compensation allowance for serving out of his own country, but he had no

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[Continued.]

objection to such an allowance so long as the pay plus allowance did not exceed the pay of the Indian recruited in India. A European could only expect a foreign allowance over and above what he would receive in England, but not beyond the average of the standard pay of India. He would not himself be prepared to serve in England for the same salary as he would receive in India, but if he found that the standard pay in the service in England was more than it was in India, he should accept that pay and would not demand any foreign allowance. He quite agreed with the general principle that when an officer served out of his own country he should receive a higher salary, and that principle would be regarded as reasonable by Indians if it was made universal throughout the services.

71,890. He was not prepared to accept the opinion expressed by his colleagues that preferential terms of pension should be given to non-domiciled Europeans. Throughout the service the responsibilities were the same, and the Indian remaining in his own country had to maintain the same social status, even after retirement, while the European could return to England and live on a lower status than maintained in India.

71,891. (Mr. Fisher.) He entered the college at the age of 19 and found his work at Sibpur College of value: the examinations at the college were not quite easy. The present course at the college lasted about two years longer than the Rurki course and a higher standard of university training was required for admission to Sibpur, he himself having passed the B.A. By lowering the qualifications for entrance to Sibpur just as good Engineers would be obtained, as the earlier a man started the more energy he had. Had he been admitted earlier to Sibpur he would have gone through the examinations with the same degree of ease.

71,892. (Mr. Madge.) The witness considered that the education imparted in England was on different lines from that given in India. In England men were educated in workshops, sea protective works, sewage works, etc., whilst in India they were educated in irrigation, canals, navigation works, and so on, and the colleges in India were more suited to education in those subjects. It would be wise to aim at raising the Indian colleges to the highest standard possible in accordance with Indian requirements and Indian conditions.

71,893. With regard to the remark in the written statement that those who failed to compete in the examination should be given preference in appointments to district boards, municipalities, and guaranteed railways, the witness said his proposal was that

(The witness withdrew.)

At Calcutta, Tuesday 6th January, 1914.

PRESENT:

THE RIGHT HON. THE LORD ISLINGTON, G.C.M.G., D.S.O. (Chairman).

THE EARL OF RONALDSHAY, M.P.
SIR MURRAY HAMMICK, K.C.S.I., C.I.E.
SIR THEODORE MORISON, K.C.I.E.
SIR VALENTINE CHIROL.

MAHADEV BHASKAR CHAUDHARI, Esq., C.S.I.
ABDUR RAHIM, Esq.
WALTER CULLEY MADGE, Esq., C.I.E.
FRANK GEORGE SLY, Esq., C.S.I.

HERBERT ALBERT LAURENS FISHER, Esq.

And the following Assistant Commissioners:—

H. H. GREEN, Esq., Superintending Engineer, Bengal.
SHASHI BHUSHAN MAZUMDAR, Esq., Executive Engineer, Bengal.

W. McM. SWEET, Esq., Chief Engineer, Assam.
H. WATKINS, Esq., Assistant Engineer, Assam.

R. R. SCOTT, Esq. (Joint Secretary).

RAI BAHADUR ANNADA PRASAD SARKAR, Superintending Engineer, Bengal (retired).

Written Statement relating to the Public Works Department.

71,900. (I.) **Methods of Recruitment.**—Imperial Engineers recruited in England.—The present system of selection by a Committee should be substituted by a competitive examination in England. In my opinion

if there were five vacancies in the Public Works Department ten men should be nominated and top five of them selected by a competitive examination for the Public Works Department; the other five would be taken by district boards, etc. Local Governments would no doubt be glad to give preference to men who had had a very high engineering training. He did not think the method would interfere with the powers of local self-government.

71,894. (Mr. Abdur Rahim.) Of late, designs for bridges had been obtained from England in one or two instances. For the Sara Bridge, he understood both designs and materials came from England. The principal work of his department was in connection with roads, buildings, bungalows, etc., but certain irrigation and drainage schemes had to be drawn out. Two new canals had been built in Bengal during the last few years, and he had been employed upon their construction with other Indian-trained Engineers.

71,895. The service would not be satisfied unless it had the same pay, pension, leave, and conditions for men doing the same class of work.

71,896. (Sir Murray Hammick.) The witness said his knowledge with regard to the designers of bridges was rather limited, as he only knew of two instances. The general supervision of the work and the preparation of the designs were in the hands of Engineers in India.

71,897. He did not believe in the value of European training for Engineers for Indian work. The training at Sibpur was quite sufficient with one or two slight modifications. Although he objected to the present arrangement under which subordinates were trained with men who received Provincial appointments, under the system he proposed for the first three years the subordinates would all be trained with the men intended for the superior Engineer Service, but it would be found there was really a difference of training at the end.

71,898. (Mr. Green.) The foreign allowance should be given so as to make the pay for the European in India above what would be received in England, but not above the standard in India. His information was that Europeans would obtain less pay if they remained in England.

71,899. (Shashi Bhushan Mazumdar.) He knew of a large number of Bengalis who had taken to engineering as a profession and were managing their own businesses as engineers. Indian engineers after retirement from the service often engaged in active practice, and he had never accepted the statement that the Bengali had not an aptitude for the engineering profession.

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[Continued.]

should be remodelled and placed on a footing similar to that of the Provincial Civil and Judicial Services, for reasons enumerated under the item III (conditions of service).

71,901. (II.) **System of Training and Probation.**—For Engineers.—The system of training that now obtains in Bengal seems to be defective and disadvantageous both to Government and the candidates, and the tests and examinations appear to be unnecessarily rigorous. In the Sibpur Engineering College the minimum educational qualifications for admission as a regular student are that a candidate shall have passed (a) Intermediate Examination in Science or Arts of the Calcutta University in English, Mathematics, Physics or Chemistry, and (b) pass such special test in drawing as may be prescribed from time to time by the Principal; such a candidate must be under 21 years of age. Under the present University Regulations the minimum age of a student at the time of his admission into the College will be about 19 years. He enters the College in the month of July. The College course is for four years, with an intermediate University examination at the end of the second year.

The final B. E. Examination is usually held in July. Then the passed students commence a year's practical training under some Public Works Department Engineers some time in the following October. Then after completion of the year's training another examination is held at Purulia in the month of November, and the successful candidate is appointed as Apprentice Engineer in the Provincial Service some time in January or February. Thus it will be seen that even a very meritorious student, who successfully passes every examination at the first chance, will take nearly six years from the date of entering the College to get an appointment in Public Works Department, Bengal, as an Apprentice Engineer on Rs. 100. After the probationary period of one year as Apprentice Engineer, he is promoted to the Assistant Engineer's grade on Rs. 250 if he succeeds in obtaining a favourable report from his Executive Engineer. The result is that an Indian Engineer commencing service at the age of 25 or 26 on the lowest pay of Rs. 100 becomes superannuated before his time comes for the higher administrative posts.

It is also disadvantageous to Government, as they get on an average of about 28 years' service from its Indian College Engineers, against about 32 from Europeans. Besides, the Government takes Indian-trained men into its service, when a considerable portion of their energies was used up in passing a number of stiff and unnecessarily rigorous tests and examinations. It is, therefore, very necessary that the system of recruitment should be thoroughly changed and simplified. It would not be out of place here to mention that the rules framed for the proposed Dacca Engineering College in connection with the Dacca University Scheme will make matters much worse. The minimum educational qualifications for admission is that the student must pass the I. Sc. Examination. Then the College course is for four years, and then practical training for three years. So a student will be about 27 before he can expect Government appointment.

I would therefore propose that age limit for admission may be fixed at 19. The minimum educational qualifications required for admission will be the passing of the Matriculation in the First Division. With better prospects for the passed students of the Engineering College there will be a very large number of applications from very meritorious students for admission into the College, and the Principal will be able to pick up the best students from the top of the list prepared according to their marks in mathematics and half the number they obtained in English. Of course, each student should produce a health certificate from the College Surgeon and a certificate of good character from the Head Master of his school.

The College course may advantageously be fixed for four years, during which the student should be given both theoretical and practical training in all the branches. The University examination that will be held at the end of the fourth year should also be both theoretical and practical. On the results of this examination the appointments on probation to Public Works Department should be made without any further practical training or practical examination. I may also

note that facilities should be afforded to the students while in the College to learn riding and cycling, and certificate from the Principal to the effect that the student can ride and cycle will be required before he is allowed to appear at the final examination at the end of the fourth year. The probationary year of the Indian College engineers may advantageously be passed in England, where they can see large and important engineering works. By the proposed system, I am sure that the Government will find in these new recruits highly trained men, both in theory and practice, full of youthful vigour and energy which, with a few years' experience and mature judgment, will make them very valuable and useful officers. These officers will be able to render useful service for a much longer period than at present.

For Deputy Engineers who should belong to the proposed Provincial Service referred to under item III (conditions of service). These officers should be appointed after undergoing a year's approved practical training in India, Public Works Department, after graduating. An allowance of Rs. 100 per month will be given to them during the probationary period, they being confirmed in the 6th grade at the end of this term. No difference in the scale of allowances should be made as at present between Europeans and Indians, as this distinction in the beginning of a young man's career has a very deleterious influence, creating a feeling of diffidence and inferiority. A further care is necessary to secure that they are not huddled up with the non-qualified Overseer-passed students as at present. No further departmental test should be made for selection for the same reasons as given for Engineers.

71,902. (III.) **Conditions of Service.**—The present conditions of service do not appear to be satisfactory. The officers recruited from England, whether Europeans or Indians, are called Imperial, and those appointed from the Indian Colleges are known as Provincial Engineers, with about two-thirds of the salary of the former. This distinction in their status and difference of salary, while they are called on to perform the same onerous duties and hold the same responsible positions, have caused many difficulties in the way of Provincial Engineers. In the Indian Civil Service there are a few listed posts thrown open to Indian officers of the Provincial, Civil and Judicial services. These officers are required to perform the same duties and hold the same responsible positions as the civilians, although their salary is about two-thirds of that of the civilians. But the conditions in this service are quite different from those of the Engineers. The salary of the Indian Civil Service is much larger than that of other services, and two-thirds of that represent a fairly good salary for the officers taken from the Provincial services. Besides, senior officers of the Provincial, Civil and Judicial services are generally appointed to grades of Magistrates and District Judges, and their pay (about Rs. 1,000 and upwards) then becomes much more than, or sometimes double of, their salary on the Provincial Service, and they consider it a great privilege and a good promotion to be so appointed to the listed posts. But in the Public Works Department our Imperial Executive Engineer has to begin with a salary of Rs. 700 only, and two-thirds of that comes to about Rs. 475, which is hardly sufficient in these days for enabling a Provincial officer to maintain his position as an Executive Engineer of a Division—a position corresponding to that of the District Magistrate in the Indian Civil Service.

The cost of living and education of children has increased considerably during the recent years. Owing to this as well as to the occasional heavy expenses on marriages and other ceremonies, which are quite unavoidable for an Indian officer of his standing and position, a Provincial Engineer finds it difficult at times to make the both ends meet. Besides, his small salary renders it rather difficult for him to exercise the required amount of control over, and command respect and obedience from, his subdivisional officers, amongst whom there may be a senior Sub-Engineer drawing nearly the same pay, or an Assistant Engineer of the Imperial Service drawing more salary than he gets. At the present time Mr. Vieyra, Assistant Engineer, Provincial Service, drawing Rs. 375 per month, has

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been placed in charge of the 1st Calcutta Division in which there are two Senior Subordinates as subdivisional officers, one of whom, Rai Sahib Priya Krisna Biswas, draws Rs. 450, and the other, Mr. Traise, draws Rs. 400 per mensem, excluding the subdivisional allowances. I am afraid it will be extremely difficult for Mr. Vieyra to exercise the required amount of authority over, and command respect and obedience from, those subdivisional officers.

A very large amount of public funds is annually expended through the subdivisional officers, and it is to the best interests of Government to strengthen the position of its controlling officers (Provincial Engineers) by improving their status as well as by increasing their salary with a view to keep them above want. I may also note that the Provincial Engineer Service is not so popular. As far as my information goes, three senior Anglo-Indian Subordinates were offered promotion to the Provincial Service, but they thought it more advantageous to them to decline the offer, and preferred to remain as subordinates. It would not be out of place here to mention that contentment amongst the members is very essential for the efficiency of the service, but from the repeated representations from the members of the Provincial Service, I am afraid, they are not much satisfied with their present position.

From the above it is, I believe, clear that in the interests of both the members of the Provincial Service and the Government, the abolition of the existing Provincial Service is very necessary, and all officers of the Engineer establishment should have equal emoluments and privileges, excepting leave allowances, which, in my opinion, should be on a more liberal scale in case of Europeans. In the above prayer I am not asking for any unusual concessions or privileges, but proposed change would simply have the effect of restoring the service to the conditions that obtained more than 20 years ago. For nearly 30 years previous to 1892 the Indian and European Engineers, recruited from England or India, enjoyed equal privileges and worked side by side in close union and harmony, and their united hands guided from inception to fruition works of great magnitude and importance in the Public Works Department, and it is very desirable that the same old conditions should now prevail. Our benign Government have introduced in recent years Provincial services in the Civil, Judicial and other departments to improve the status and condition of the subordinate establishments entrusted with subordinate duties in their respective departments. The position of a Deputy Magistrate or a Munsif, who has been considered a subordinate, some years ago, has been much improved by the creation of the Provincial Service in the Civil and Judicial Departments, though their duties remain the same as before. But the creation of the Provincial Service in the Public Works Department, instead of improving the status of its subordinates, which is very badly needed, had unfortunately the effect of lowering that of its officers.

Deputy Engineers.—As already said above, the creation of the Provincial services in the Civil and Judicial departments has greatly improved the status and position of the Deputy Magistrates and Munsifs usually entrusted with subordinate duties in those departments. It is now time that something should be done for improving the position and emoluments of the Upper Subordinates of this department. In the olden days candidates with indifferent knowledge in Engineering were appointed as Upper Subordinates, but the conditions are quite changed. Now graduates in Engineering are usually employed as Upper Subordinates. The course of study and training undergone by them is far more difficult, and extends over a longer period than that of a candidate for the Provincial Civil Service. They are now usually entrusted with much more important duties than formerly, and their case deserves favourable consideration. It is believed that the question of improving their position

is now engaging the attention of Government. The creation of the Provincial service for these Upper Subordinates appears to me to be the best solution of the problem. The members of this Provincial service may conveniently be called Deputy Engineers. These subordinate officers, generally in charge of subdivisions, directly deal with the expenditure of a large sum of money annually, and the temptations are great. I think it will be to the advantage of Government to improve their status and increase their salary to a slight extent.

71,903. (IV.) **Conditions of Salary.**—For Engineer Officers.—The existing scale of salary appears to be sufficient.

For Deputy Engineer of the proposed Provincial service, I would propose six grades ranging from Rs. 150 to Rs. 500, as noted below:—

	Rs.
1st grade	500
2nd „	400
3rd „	300
4th „	250
5th „	200
6th „	150

Nowadays Engineer graduates are appointed in the 1st grade Overseer on Rs. 100. They can rise to Sub-Engineer, 1st grade, the maximum pay of which, including two increments, of Rs. 50, is Rs. 500.

From the above it will be seen that the maximum pay (Rs. 500) of the proposed Deputy Engineer is the same as at present. Only the initial pay is recommended to be Rs. 150, in the place of Rs. 100, in the existing scale. Thus the creation of the Provincial service of Deputy Engineers will not involve a very heavy additional expenditure.

71,904. (V.) **Condition of Leave.**—For short leave and leave on urgent private affairs the rules, which are the same in case of Europeans, are fair, but the latter leave may be granted to Indians in instalments. As regards furlough, the proposal now under consideration of the Government will suit.

71,905. (VI.) **Conditions of Pension.**—The maximum limit of ordinary pension should be raised from Rs. 5,000 to Rs. 6,000 per annum.

Special pension for the service of three years as Superintending Engineer should be Rs. 1,500 in place of Rs. 1,000 as at present.

Special pension for service of three years as Chief Engineer should be Rs. 3,000 in place of Rs. 2,000 as at present.

71,906. (VII.) **Limitation in the Employment of Indians.**—The maximum limit of 10 per cent. of appointments by the Secretary of State should be raised. The low limit was put, as it was anticipated, that the Department will be swamped by Indians otherwise. Experience shows now that these apprehensions are groundless. Besides a fairly good number of officers appointed from Indian Colleges, as shown in the Classified List, are Anglo-Indians. I believe the maintenance of a large European element in a technical department like the Public Works Department is not demanded for political consideration, and therefore strongly urge that a larger number of appointments may be thrown open to Indians in this Department than hitherto.

If the above proposal be adopted and the prospects of Engineer Service be improved, the best intellect of the country will be attracted to our Engineering Colleges, and, if at the same time the system of training in our colleges be improved and placed on a sound basis, the out-turn cannot but be highly satisfactory. In my opinion expansion of Engineering education amongst the people of this country is very necessary for the development of its resources, for advancement of its sanitation, and for improvement of its drainage and water-supply.

71,907. (VIII.) **Relation with the Civil Service.**—The relations with civil officers are cordial.

RAI BAHADUR ANNADA PRASAD SARKAR called and examined.

71,908. (Chairman.) The witness had been 28 years and 7 months in the service. Prior to his retirement he had officiated as Chief Engineer in Bengal for four months.

71,909. The maintenance of a large European element in the Public Works Department was not demanded by any political considerations, and therefore he urged that a larger number of appointments

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should be thrown open to Indians. He suggested the proportion of those recruited in India and those recruited in England should be half and half, which would mean nearly doubling the present proportion of Indian Engineers.

71,910. He advocated a competitive examination in substitution for the present system of selection, because it was not possible to test the qualifications and capacity of a candidate simply by an interview. He admitted that the selection was based upon a qualification, and was not merely haphazard, but a University degree was not compulsory in all cases. He did not know of any cases of candidates who had been admitted to the service who had not a qualifying degree prior to selection, so that his objection to the present system of selection based upon a qualifying test was a theoretical one. He would insist that competitors should hold some University degree, which would mean that they would have to have some practical as well as theoretical training in the University. He would not say that the officers now entering the service were not properly qualified for their duties, as he had no personal experience of the matter.

71,911. He was not in favour of the suggestion that all Indian candidates for the Provincial Service should be trained at one central college; there was ample room for the present four colleges. In Bengal there were special engineering conditions, such as tidal navigation, channels, waterways, the improvement of drainage, and the reclamation of waste land, all of which were peculiar to Bengal and the theory of which should be studied in a Bengal college. The average number of candidates passed out of Sibpur College every year was seven or eight, only one of whom was admitted to the superior service. In spite of that fact, he could not say it would tend to more efficient education and training if one central college were established, more efficient training would be secured by increasing the number of appointments from the several Provincial colleges.

71,912. He suggested a new service of Deputy Engineers in substitution for the present grades of Sub-Engineers, Supervisors and Overseers. With regard to the training of those officers, at present they were usually graduates of the Sibpur Engineering College, and he would not make any alteration in that. The guaranteed posts would be filled by the best men, and the rest of the men would become Deputy Engineers.

71,913. The statement, that the facilities available in India for practical training were as good as those in England, might be true, but in England men could see all kinds of works and gain considerable benefit by their travelling. English training was no better than Indian training, except in the matter of this additional experience.

71,914. (Lord Ronaldshay.) The system of recruitment in witness's day was by competition. There were two guaranteed posts in the superior service open to candidates from Sibpur in the year he was selected. He was trained alongside all the other students who were eventually to become subordinate officers. In one way that was a good system, in that the present sub-divisional officers were of a very high stamp, and were rendering very useful assistance in the department.

71,915. His object in suggesting the creation of a class of Deputy Engineers was to improve the status of the subordinate service. If that were done, it would be possible to fill all the sub-divisions from the Deputy Engineer class instead of employing temporary engineers, and it would be possible then to confine the temporary Engineer to temporary work, and not put him in permanent charge of sub-divisions.

71,916. (Mr. Sly.) The reason why certain subordinates had at one time declined to accept promotion into the Provincial Service was because they were obtaining practically the same pay, or more, in their then positions, and if they had entered the Provincial Service, they would have had to begin at Rs. 250, and to take their chance of promotion according to the term of their service. Probably by remaining in their subordinate position their prospects of promotion were much higher. Time would not have

permitted of their being promoted to a much higher salary, if they had entered the Provincial Service.

71,917. There was a fairly good demand for Engineers outside Government service, for instance, in private firms, on District Boards, etc.

71,918. (Mr. Fisher.) The salary a man would receive on District Boards immediately after leaving college would be about Rs. 150.

Practical and theoretical teaching should go hand in hand in all the colleges, but under the present system the practical work had to be done after the college course. Some students were taken to important works occasionally, but not to any large extent.

71,919. (Mr. Madge.) In India the conditions of engineering work were so different in the different provinces that it was necessary that students should be conversant with the work they would have to perform during their service later on, and in that connection provincial institutions seemed to offer more advantages than a central college. The training obtainable in India was in some cases up to the standard of the training obtainable in England, and in some respects the Sibpur College course was much stiffer than the old Coopers Hill course. He did not approve of the removal of Sibpur to Dacca, as there were hardly any engineering works of importance in the neighbourhood of Dacca and the training of the students would be purely theoretical; it would be analogous to teaching chemistry without a laboratory. If the Sibpur College had to be removed on the ground of the district being unhealthy, he would prefer a large Provincial college in the neighbourhood of Calcutta.

71,920. (Mr. Abdur Rahim.) The work done by the Engineering Department chiefly related to buildings, canals, waterways and embankments, the buildings including hospitals, schools, colleges, godowns, etc. Of late very few canals had been built, the work now being mostly drainage channels, drainage being the principal work at present in Bengal. Executive Engineers were placed in direct charge of all works, both construction and maintenance.

71,921. The practical training of students in irrigation was not satisfactory at Sibpur; there should be more practical training on the works themselves. Practical training should accompany the theoretical training as at Cooper's Hill. He recommended a four years' course. Students at Sibpur should be taken to different works for practical instruction, and at the end of the course they might at once enter the service. Sibpur College covered Bengal, Bihar, and Orissa, Assam and Burma, but Bihar and Orissa were not now taking officers from the college. At present he believed that in Bengal only one Rurki student was employed.

71,922. (Sir Murray Hammick.) Some students after leaving the college underwent practical training at their own expense, and frequently applied to complete their training on Government works. Many went to railways with scholarships given by the Educational Department, and therefore paid nothing. Those who were not fortunate enough to obtain the Government scholarship had practical training on Government engineering works in Calcutta and the district. One of the conditions of employment by a District Board was that a man should have had some practical experience in the Public Works Department or other recognized institution for five years. Of the students who could not obtain practical training, some entered works in different capacities, others started private work on their own account, and some joined the staff of contractors. A student leaving college generally considered that, having passed his examination, he was entitled to be paid for any work he might do. As a rule students were capable of doing certain forms of work under a sub-divisional officer and usually carried out their duties satisfactorily.

71,923. (Mr. Green.) After Coopers Hill men had completed their third year and passed a final examination they were taken into the service and in their first year were either sent out to India for practical training or given that training in England. A further year's probation in connection with particular kinds of work would be useful.

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71,924. With regard to the pension paid to Chief Engineers appointed before 1893, it did not consist of Rs. 2,000 in addition to Rs. 1,000, the pension of a Superintending Engineer, but of Rs. 2,000 in all.

71,925. (Mr. Mazumdar.) The scale of salary he had

(The witness withdrew.)

SIR RAJENDRA NATH MOOKERJEE, K.C.I.E. (of Messrs. Martin & Co., Calcutta).

Written Statement relating to the Public Works Department.

71,926. (I.) **Methods of Recruitment.**—For the superior grades of Engineers for the Imperial Service I would suggest that two-thirds be recruited from England and one-third from India by open competition, the examinations in both countries to be of the same standard. It would be desirable to have the examinations identical and held simultaneously, but if this is considered inexpedient the subjects and question forming the examinations should be practically the same.

71,927. (II.) **System of Training and Probation.**—The successful candidates recruited in England (i.e., two-thirds of the total number required each year) should have one year's practical training and probation service in Europe before coming to India. They should during this probationary period pass a colloquial examination of the language of the province to which they are posted. On the termination of one year, they should pass a further examination testing the practical experience gained and then be sent to this country. Those recruited in India (i.e., about one-third) should be sent to England to get practical experience for two years. Candidates from both countries should receive the same allowance during the probationary period, but no one ought to be confirmed in the service who has not passed the practical test examination.

71,928. (III.) **Conditions of Service.**—Should remain as now in force in the Imperial Service, i.e., as for the Indian Civil Service.

71,929. (IV.) **Conditions of Salary.**—European and Indian members of the Service should receive the same salaries, whether recruited in India or England provided they qualify themselves according to what has been stated above in paragraphs 71,926-7.

71,930. (V.) **Conditions of Leave.**—Should be the same as in the Indian Civil Service.

71,931. (VI.) **Conditions of Pension.**—There should be no distinction, but should be as now exists in the Imperial Service, i.e., European and Indian members alike draw the same pension.

71,932. **General Remarks.**—The number of appointments to be offered to Indians in India should vary according to the number of Indians passed and admitted in England, so that the number of Indians

proposed for the Deputy Engineers would be a vast improvement on the present rate of salary, and Deputy Engineers would be glad to have some improvement, however small. Later on probably it would be necessary to improve the salary again.

in the Service should not exceed one-half of the total number at least not during the next few years. There should be a separate service called the Provincial Service, the members of which may be styled "Deputy Engineers" or "Assistant Engineers" or some such name. They should be recruited from the Provincial Engineering Colleges by competitive examination. The successful candidates for this service should receive practical training in India for two years and during this probationary period receive a salary of Rs. 100 per mensem. On the termination of the two years a further examination on practical experience should be held and those who pass may be confirmed in the service on a salary of Rs. 200 rising to Rs. 600 per mensem with travelling allowance, &c., as at present. As a rule the members of the Provincial Service shall not be appointed to Executive or Administrative appointments. Exception may be made in specially meritorious cases where such promotion may be permitted, but before the promotion is given, the "Deputy" or "Assistant Engineer" should be compelled to spend one year in Europe to obtain practical experience there. They should be allowed study leave or furlough for that period.

There should also be a Subordinate Grade to be recruited by open examination from the Provincial Engineering Colleges. These men should receive practical training for one year during which probationary period they should receive a salary of Rs. 40 per month. When they pass they will be confirmed in the service on Rs. 60 rising to Rs. 150 per mensem. Specially meritorious members may be promoted from the Subordinate Grade to the Provincial Service.

All candidates whether recruited in England or India should be required to produce certificates of character and social status from two people of standing (to the satisfaction of Government) in addition to medical certificate.

My remarks above have been confined to recruiting. To remove the grievance of those who now hold Executive Engineer's posts I suggest that they be allowed to proceed to England to such study of scientific subjects as will be prescribed by Government, and on their qualifying they be permitted to enter the Imperial Service in the same grade as that in which they were posted before going to England. During their absence from India they will get study leave allowance.

SIR RAJENDRA NATH MOOKERJEE called and examined.

71,933. (Chairman.) The witness said his recommendation was that two-thirds of the superior service should be recruited from England and one-third from India by open competition, and he would regulate the recruitment so that not more than 50 per cent. of the vacancies in the service should be filled by Indians. After the English appointments had been settled an endeavour should be made to discover how many vacancies still existed, and so many appointments should be made in India for that year. For instance, supposing the Government required 50 Engineers for a certain year, and 30 or 40 were appointed by competitive examination in England, out of which number 10 or 20 were Indians, competition should be held in India to fill the number of vacancies to which Indians were entitled. The present selection did not give satisfaction or tend to the efficiency of the service, as a certain amount of favouritism could not be avoided. He knew from his experience that the 10 per cent. Indians selected by the Secretary of State were not so good as some of the Indians who were not selected.

71,934. The number of Engineers employed by Messrs. Martin & Co. amounted to about 100, 10 of whom were Europeans, and 90 Indians. The best

men obtainable were recruited by selection on a qualifying test, and he regarded that as the best method of obtaining the most efficient men. There was no fixed proportion between Europeans and Indians, an Englishman being brought out when a man of high attainments or qualifications was required for certain work. There was only one Indian in the higher posts of the firm, the responsible charges being held by Europeans. At present there were only two Indians on the staff who had been trained in England. The Indians were recruited from different colleges in India, many of them coming from Sibpur and Rurki, and one or two from Poona. He did not attach much importance to the particular college, having had three or four very good men from Sibpur and one or two from Rurki. The training in colleges was only theoretical and it depended on the man himself after he left college whether he became a good Engineer. The age of recruitment was twenty-one to twenty-five except in the case of Europeans, who often came out between twenty-five and thirty. Young Indians were only taken on as apprentices and given a small allowance for a year or two before being placed as Engineers in any responsible work. A European Engineer had always had experience, either on rail-

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ways or waterworks or in architectural work, but the firm themselves preferred to give Indians their practical training, paying a lower salary while doing so.

71,935. Witness favoured the establishment of one well-equipped college for training for the higher posts in the service, each province sending its own men to the college. He advocated a central college purely on the ground of efficiency in training.

71,936. In future Indians recruited to the Imperial Service should be sent for two years' practical experience to England, where they would not only obtain technical engineering experience, but would have their views very much broadened, their general culture improved, and would learn lessons of manliness, courage, etc. On their return they should be posted to work where they would be under supervision, and, if they passed a practical test, should be made officers in the service. Some Assistant Engineers might be recruited in India without going to England. He laid great emphasis on English training, because his experience showed that Engineers who had been to England were much better men than those with only Indian experience; they attained to positions of greater authority and responsibility in the business.

71,937. He regarded it as injurious to the service to lay down the proposition that so many promotions to the superior service should be made every year, and considered it should be left to the discretion of the Government as efficient men were found.

71,938. European and Indian members of the service should receive the same rates of pay whether recruited in India or in England. There was some difference in the market value of imported labour as compared with local labour, but considering the question from the broad point of view it was better that men should have the same pay; discrimination only tended to increase discontent and raise the racial question. Young Europeans coming into India on higher pay for the same work came to the conclusion that they were better than the Indian men. Indians were adopting English modes of living and had as much expense as Englishmen, because they could not discard their own relations and friends. He thought an Indian would be prepared to serve in England for the same salary as he received in India, but in some parts of the world there might be circumstances which necessitated higher pay. If a scheme were devised which generally recognised that imported labour was paid at a higher rate than indigenous labour, he would still insist on no difference being made. Very few Indians would aspire to the higher positions, as the general capacity of European Engineers was greater than that of Indians, and promotion according to merit would lead to very few Indians attaining the administrative grades. A few hundred rupees more paid to Indians would not be a very heavy burden on the Exchequer.

71,939. (Sir Murray Hamrick.) When he said that the best men in England did not get appointments, he was referring to Indians, not to Europeans. If Indians were asked to go to England for two years before the higher posts were available to them, not a very large number would go, and men, who had aspired to the higher posts and became as competent as Europeans, should undoubtedly receive the same pay. It was an injustice to pay an Indian less than a European, if he reached the same standard and performed the same work. When Englishmen would not come to India on the same pay as the Indian then would be the time to consider the question of a higher allowance. The best Indians would not be obtained if they were told that they would have to do the same work as the Englishmen on two-thirds of the pay. It was for that reason that the Engineering Department at present was so badly manned.

71,940. (Sir Valentine Chirol.) He was aware that a man who obtained a certain pay in England was often given a foreign allowance when serving in other parts of the Empire, but that did not apply to India. He did not think it was good policy, having regard to the present condition of the country, to give the same rates of pay to Indians and Europeans and supplement the pay of the latter by an Indian service allowance.

71,941. There should be no Public Works Department in the Presidency towns except a supervising establishment to direct work done by private agencies, and the Commission might take into consideration the

question whether it was necessary now to recruit on the same scale as in the past. He recommended that the recruitment should be very much less. Work now done by the Public Works Department could be carried out more efficiently and at less cost by private enterprise. As an instance, he mentioned that his firm had been given building work at Dacca, and had completed the work before the time stipulated, and the work had not been inferior to the work done by the department. Very little work was given to his firm, owing to the department desiring to do everything themselves, but wherever opportunities had been given the firm had proved that they were able to do the work better and cheaper than the department itself. Having to maintain a very large establishment the estimates of the Public Works Department were often higher than necessary, but no such large establishment was needed. Whenever the firm had works to carry out which required a larger staff than the normal establishment, temporary assistants were engaged locally, and if exceptional experience was required men were brought out from England.

71,942. The Irrigation Branch of the Public Works Department stood on a somewhat different footing from the other branches, because they had certain administrative functions to perform, such as assessing rents, rates, etc., and he gathered that the Irrigation Service suffered somewhat owing to its being a part of a department in which a great deal of other work was carried on.

71,943. His firm did not always take men with University titles and degrees but men with practical experience who had been apprentices to large firms. In the Public Works Department, however, which was a Public Service, the Government had to pay something towards the training of their Engineers. In engaging their men the firm did not care whether men had University degrees or whether they were over 30; they chose the best men, paid their passage both ways, and gave them good pay. The Government, with their rigid rules, could not do that, and, therefore, it was best to have a competitive examination and train the men afterwards. He was not a believer in academic distinctions for professional work.

71,944. (Mr. Abdur Rahim.) The Europeans in his firm were recruited at a higher age than those who entered the Public Works Department, and they were given special rates of pay and a certain share in the profits. The pay varied from Rs. 800 to Rs. 2,000. They corresponded to Superintending Engineers in the Public Works. They came out on a five years' agreement, which was generally renewed, and there were men at present who had been 25 years in the firm's service. A pension fund had been established to which the men subscribed, the firm adding an amount equal to the subscriptions. The leave rules were not very rigid. Sometimes if men had worked very hard they were given six months' leave on full pay after three years' service, and their passage out and home was paid by the firm. According to the agreement they were entitled to three months' leave on full pay after three years' service, but they were generally given more.

71,945. Indian Engineers came from the Indian colleges as apprentices on Rs. 100, and if they did good work could rise to Rs. 800, promotion being made not on an incremental scale but according to competence. There were two Anglo-Indians in the service who received the same pay as Indians. The Indian in the highest grade was paid the same rate as the European and was treated as an Englishman in every sense, and every Indian doing the same work as a European would receive the same pay. On all grounds, political and social, he deprecated any distinction in pay and promotion being given by length of service. His own scheme was that Indians on Rs. 200 to Rs. 600 should be employed on most of the work; and that there should be a limited number of European and Indian Engineers on higher pay doing the higher class of work.

71,946. (Mr. Madge.) He practically proposed simultaneous examinations for recruitment. The standard of engineering in India was at present not as high as in England, and if a simultaneous examination was adopted, the Indian college course would

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have to be altered to agree with the course in England. Indian theoretical training should be levelled up to the British standard. Until that was done it would be necessary to recruit in England for some time. Should the Commission come to the conclusion that the difficulties in the way of simultaneous examinations were so great as to make them impossible, he would be satisfied to have the standard of examination in India made the same as that in England.

71,947. One well-equipped college for the whole of India would be quite sufficient for a number of years to come to train all the engineering students in the country. He would not, however, abolish the Provincial colleges, as there might be technical colleges for the training of men for the posts the pay of which was Rs. 200 to Rs. 800.

71,948. With reference to the appointment of Engineers to his own firm, in the case of Europeans testimonials were sometimes obtained from well-known Engineers with whom the candidates had been working or from managers or railway companies or large engineering firms. In the case of Indians the firms generally noted whether they had any college certificate, though personally he did not attach much value to that. There were many men in the firm who had failed in the examination of the engineering colleges and yet were better men than those who had passed. If a boy who had failed entered the firm he was taken on as an apprentice and in a few years very likely became a useful man. It was practically a system of selection, not a competitive examination. His objection to selection in England was based on the fact that the Public Works Department was a public service and without public competition there would be complaints. The public had no knowledge of what went on in connection with Messrs. Martin & Co. and therefore could not interfere, and there was no newspaper comment upon the appointments. Personally he thought selection would be the best, but he believed the public would not agree with him.

71,949. There were not many domiciled Europeans or Anglo-Indians in the firm, but those who were there were as good as Indians. Unless they had been to England, however, they were not as good as Englishmen.

71,950. He objected to promotion from the Provincial Service to executive and administrative appointments, but admitted that some very good officers had been obtained in that way. On the whole he thought such selections were not wise and believed if Chief Engineers were asked privately they would say the same thing.

71,951. (Mr. Fisher.) In each of the Presidency towns there was a sufficient number of efficient and trustworthy firms to undertake work now done by the Public Works Department, and if the department were abolished there would be a very healthy competition not only in Calcutta, Madras and Bombay, but in Allahabad and Lucknow. That would naturally involve the corollary that the Indian Stores Department in England would come to an end or be considerably reduced. The Government could supply itself with what it needed quite well in India. If the Commission would take evidence from all the Engineers in responsible position, confidentially, allowing them to say freely what they thought, they would unanimously say that the Stores Department should be abolished.

71,952. He laid very great stress upon training in England and his views were not modified by the difficulties that might exist in England as to means of training in connection with civil engineering. The men could obtain a good training on railways and on other extensive works, and they would at the same time be acquiring a general culture which was of great importance to them; he laid much stress on the social value of an English training. The fact that it was almost impossible to give men civil engineering work in England did not really effect his conclusion, as it was necessary for civil engineers to obtain some knowledge of mechanical engineering as well, and it was on the mechanical side that Indians were weakest.

71,953. There was a large field of training for civil engineering work in India if arrangements could be made with private firms. Such arrangements could

be made if the money were forthcoming, but students objected to serve as apprentices without pay. It was true that, owing to the fact that a good deal of manual work was done by lower caste Indians, Indians of good family would not work side by side with them, but that prejudice was gradually dying out. There were not the same facilities for training in mechanical engineering and electrical engineering in India as existed in England. Indians entering the Public Works Department should be of very good family as they were exposed to great temptations in that department; to some extent his objection to the selection of Indians in England was founded on the fact that this consideration had not been kept in view.

71,954. (Mr. Sly.) It was not true that Government works in Presidency towns were already given out on contract; the contract only referred to labour. The department did everything, even to the making of bricks. The labour was contracted for and put under the supervision of Overseers and Sub-Engineers. It was impossible, having regard to the way the work was done, for any self-respecting man to take work under the Public Works Department. The accounts of the department were "cooked" in different ways to show that cheaper work could be done than by private firms. He did not know of any work that had been given out to a contractor by the department. Outside Presidency towns the department at present would have to continue, but if his scheme were adopted, all Engineers would stop hankering after Government service, and in a few years the Public Works Department would only need generally to supervise the scheme to see that the work was being done satisfactorily.

71,955. In his proposal for the creation of a separate college for the whole of India he had considered the difficulties that might be experienced in inducing people from different parts of India to go to one college, but he had come to the conclusion that students who would not go to another part of India were not fit to be Engineers. Rurki would make a very good centre for the College, and it would be quite reasonable to ask Madras to be trained at Rurki, as a man who desired to be an Engineer should be prepared to work anywhere at any time. If the number of students were sufficient, the Government could select men to work in their own provinces, but he saw no objection whatever to a Madras going to Bengal or a Bengali going to Madras. All Engineers should be Imperial Engineers on definite salaries, and appointments should be made either by the Government of India or the Secretary of State. In distributing the men Government would consider whether they were Muhammadans, Bengalis, or Madrasis, and he did not think the current idea that the Bengali would monopolise everything was correct; Madrasis and others would soon be taking their rightful place.

71,956. When men had passed through the central college they should be sent to England for two years' training. They might put in one or two years' service in India before being sent, but he thought they would benefit most if they went when they were quite young, directly they had left college.

71,957. (Mr. Chandal.) The witness believed there were sufficient facilities in England for Indians to obtain practical training in everything except civil engineering. As a rule, it would only mean that ten Indians would require training in England each year, and he thought that number could be provided for quite easily.

71,958. The Indians who were employed by his own firm in the higher ranks did not rise from the lower ranks but had five years' training in England and were recruited like Europeans. Among the 90 Indians there were none who in the course of time would be capable of doing the same work which the superior Engineers now did. If trained in England it would not be impossible, but to be placed in a position similar to that occupied by Europeans in the firm Indians required to be equal in every respect, both professionally and socially.

71,959. His reason for confining the work of private companies to Presidency towns was that in Calcutta large firms would not go to the mufassal unless the work was worth while. If it became the practice to

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entrust mufassal work to private companies more private companies would take up the work, and gradually Engineers from engineering colleges would divert their attention to private practice. There was nothing in the nature of engineering work in the mufassal which made it essential that it should be performed by a Public Works Department. As a matter of fact the work was generally of small extent and required very little engineering skill.

71,960. If a central college were established, before students were admitted they should be tested in drawing, mathematics, etc., and naturally those who came from a Provincial college would have had greater facilities for studying such subjects. A man with a good aptitude for mathematics might enter the college after a year at a Provincial college while other men might take three years. The central college course would occupy three years. He would not make it compulsory for a student to have previously been in a Provincial college; if a student had taken his B.A. from any good college he might quite well enter the central college. It would be quite possible for a man to pass out of the central college at the age of twenty-five.

71,961. (Sir Theodore Morison.) There was a sufficient number of firms in Calcutta at present to take over the work of the Public Works Department. A large number of Government buildings were built in

(The witness withdrew.)

B. HEATON, Esq., Principal, Civil Engineering College, Sibpur.

Written Statement relating to the Public Works Department.

71,963. (I.) Methods of Recruitment.—(a) In England.—I have no remarks to offer except that, in my opinion, recruitment in England should be confined to Europeans, and that Indians should be taken from the colleges expressly established in India by Government for the training of Indians for officers' posts in the Public Works Department.

The making of a successful practical Engineer depends more upon the experience gained during his apprenticeship to the profession after leaving college, and on his experience in the actual practice of Engineering than on his studies at the college. The facilities available in India for giving suitable practical training are, I believe, greater than in England, and the number of students passing out of Indian Engineering Colleges seeking such apprenticeship is much less than the number passing out of English Colleges who must be provided for in England. Therefore, if we can arrange a thoroughly satisfactory practical training in India, we should produce as good, if not a better Engineer out of an Indian than is likely to be done in England.

In view of the fewer facilities that exist, and of the prior claim of Engineering graduates trained in England, it would be extremely difficult to arrange suitable practical training in England for the graduates of Indian Colleges.

(b) In India.—Indians for the officer grades of the Public Works Department are trained in India at—

The Thomason College, Rurki.
The Civil Engineering College, Sibpur.
The Civil Engineering College, Poona.
The Civil Engineering College, Madras.

Each of these colleges admits students from a definite area which is laid down by Government.

The sphere of Sibpur embraces the following provinces:—

Bengal.
Bihar and Orissa.
Assam.
Burma.

The area of population within the sphere entrusted to Sibpur compared with the rest of India is one-third nearly in each case as shown in Imperial Gazetteer. A larger proportion than in the case of any of the other Indian Colleges.

Any student, resident within this sphere, who wishes to be trained in India for the officer grades of the Public Works Department must, under Government orders, seek admission to the Sibpur College, and I maintain that the amount of Government patronage

Bihar and four firms were asked to tender for certain work, and the tender of his own firm was accepted and the firm finished the buildings. He would initiate the policy of entrusting the work to firms in the large towns; there were many firms with sufficient capital and knowledge to undertake it; but he would exclude irrigation and railways and deal only with roads, buildings and bridges.

71,962. (Lord Ronaldshay.) The Indian Engineers employed by his firm were of the same standard as the Indians now going into the Provincial Service, because those who could not get into the Provincial Service came to the firm. The salary paid to Indians was from Rs. 100 to Rs. 800, with bonuses to special men for good work. To obtain higher salaries the men had to go to England and pass certain tests. The higher Engineers were almost exclusively recruited in England. The apparent contradiction in the fact that in the firm's business the higher Engineers were almost exclusively recruited in England while he advocated that for the higher department of the State at least one-third should be recruited in India was based on the idea that the Government had to look at things from points of view which were excluded from the consideration of a business firm. To put it briefly, the Government had to consider the Government of the country, and the distinction was made really on political grounds.

offered to the colleges should have some reference to the amount of Civil Engineering enterprise (Public Works Department, Railway, &c.), that is to be found within the sphere entrusted to Sibpur. But this is far from being the case, the allotment of guaranteed Assistant Engineer posts amongst the colleges was till 1913 as follows:—

Rurki	...	...	...	6
Sibpur	...	...	...	1
Poona	...	...	...	1
Madras	...	...	...	1

But since the formation of Bihar and Orissa, the Bihar Government have repudiated the claim that the college possesses (in view of customs) of supplying that Province with Assistant Engineers, and the Bengal Government have informed the Government of India that they can take an ex-student each alternate year only. This reduction has been sanctioned. So now the guarantee stands at one post every other year which will of course make difficulties in recruiting students for admission in the blank years.

The rules regarding the obtaining of guaranteed Assistant Engineer posts in Assam and Burma by Assamese and Burman students lay down that, in order to obtain such post, the Assam and Burma lad must actually pass the Bachelor of Engineering Examination at the top of the list of merit. Lads of those provinces are never likely to beat the more highly educated Bengali in the Bachelor of Engineering Examination; consequently the officer grades of the Assam and Burman Public Works Department are practically closed to Assamese and Burman students.

Although, however, Sibpur does receive students from Assam and Burma for training, we do not receive any of the patronage of the Public Works Department of those provinces; perhaps they do not wish for Bengali Engineers.

Thirty-two students are admitted yearly to the Engineer classes at Sibpur, the number that pass through and qualify at the end of the four years' course average 11; of these one obtains the guaranteed post and the remainder have to accept what service they can get; this means that (since practically all the Civil Engineering work is in the hands of Government or quasi-Government concerns) most of the students have to accept posts in the subordinate services from which it is only few that rise to the officer grades.

One such promotion is guaranteed each alternate year to a Sibpur lad. One or two may become District Engineers after some five or six years. Hence we find that many subordinates possess Assistant Engineer qualifications and consider themselves as

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[Continued.]

good as their officers. It is not good for discipline, to have so many discontented men.

The struggle for a living and for Government service in Bengal is getting keener every year, and the attraction of even the single guaranteed post offered at Sibpur is such that it has raised the standard of admission. About 25 per cent. of the students now admitted are Bachelors of Science and their actual age about 20. The new age regulations of the Matriculation Examination of the University will affect our Bachelor of Science admissions from and including next year. By these regulations the minimum age on passing the B.Sc. will be 20 on March 1st, and, as our admissions are made on November 1st, the youngest B.Sc. student must be about 21 then and the average older, so that no B.Sc. could pass the B.E. degree (a four-year course) under 25, that is, if he secures promotion each year. The average B.Sc. would be probably 26 or 27, and as he cannot join Government Service until the completion of his year's practical training, he will then be 27 or 28. Students who join the college after passing the I.Sc. Examination would be two years younger, 23 being their possible minimum on joining Government Service. This corresponds, I think, fairly well with English Engineering Colleges.

Bengali students do not appear to be keen on Engineering for its own sake; they are more interested in trying to obtain a Government post. Most of them have applied also for admission to the Medical College and prefer to take admission there, unless they have been awarded a Civil Engineering College Scholarship. They appear to rely largely upon their exceptional powers of memorising, hoping that the chances of mere examination may secure for them a permanent Government post. Hence they would prefer that the guaranteed post should be awarded solely on the results of the B. Examination. They do not want their practical abilities to be judged.

The Bengalis that come to us are practically ignorant of Drawing, and none of them have that popular knowledge of elementary Engineering that is possessed by practically every school boy in England. They are of a more dreamy and philosophical nature, they do not care for work in the workshops and a comparatively small proportion play games. Owing to the unpractical nature of the Bengali, the Public Works Department have been forced to institute a practical examination held at the end of the 12 months of practical training that the students undergo after passing their B.E. Examination.

71,964. (II.) **Systems of Training and Probation.**—This period of training is far shorter than the ordinary apprenticeship a European lad undergoes, and it is far too short to enable the really practical man to show his head above the crowd. It is not every man that passes through an Engineering College in England who ultimately joins the profession, and it is obvious that the proportion of unsuitable Engineering graduates is likely to be higher in India. In England permanent appointments are scarce and, an Engineer, in order to obtain a living, must be a really practical man, so those unsuitable leave the profession at an early stage.

In India (since all Civil Engineering is in the hands of Government or quasi-Government concerns) permanent appointments are the rule. Selection for these should not be made until a man has really shown ability as a practical Engineer. It is very probable that one reason why Indian Engineers, in general, have not a good reputation as practical men is, the ease with which unsuitable men are able to obtain and to retain permanent posts.

Mr. B. HEATON called and examined.

71,967. (Chairman.) The witness said he was recruited to the Public Works Department 26 years ago from Cooper's Hill, served four years in the Department and then joined the Civil Engineering College as a Professor. He had been Principal for nearly 10 years.

71,968. There were at present two departments at Sibpur, the Engineering Department and the Apprentice Department. In the former there were about 100 students studying for the B.E. degree of

There is not the same reason for giving a man a permanent post when he is serving in his own country, as in the case of selected Engineers imported from Europe.

The length of practical training (apprenticeship) should certainly be extended up to three years, increased pay (depending upon satisfactory work) being given in the last two years. Even at the end of this period it is not necessary to offer permanent employment. Selection for the permanent staff should be made on reaching the Executive Engineer rank, Assistant Engineers being employed on temporary terms. This would enable an increased number of Assistant Engineers to be engaged.

Assistant Engineers, not selected for the permanent staff, would have had very sound practical experience, and should be able to obtain ready employment on the Engineering staff of District Boards, Municipalities, &c. Those who have proved unsuitable for the profession would have been discovered at an early stage, they would leave the profession then and would not bring a bad name on the Indian trained Engineer.

If such a method of recruitment be adopted it would give the Indian, who is really an Engineer, a real chance of coming to the front, and would make it easy to select exceptional men for special promotion to the Imperial Service. The knowledge that (as in England) a man's future will depend upon his practical ability as an Engineer, more than on his skill in passing examination tests, will tend to restrict the admissions to the college to lads who have a taste for Engineering, and will tend to keep out the unfit and those more suitable for the medical or other professions.

As noted above, the extremely limited patronage offered by Government to the students of this college has little reference to the sphere entrusted to the college, or to the amount of Civil Engineering construction within that sphere. Increased patronage would attract a larger number of suitable students, and would raise both the prestige of the college and the quality of the output.

Increasing the period of practical training to three years will treble the number of student Engineers under practical training at one time, and may make it difficult to arrange for suitable training.

The Engineers under whom students are placed for training need not be confined to officers serving under Government, but ought to include Engineers serving on railways and with private firms, the Engineer, whether Government or official, being paid a suitable premium for at least the first year's training.

71,965. (VII.) **Employment of Non-Europeans.**—As more suitable training can be provided in India than in Europe for Indians being educated for the Public Works Department, I am of opinion that no Indian should be recruited in England.

In view of the hereditary influences, early environment and unpractical preparatory school training of Indian students, it is not likely that for many years the average Indian will be equivalent to the imported European; therefore I am of opinion that the distinction between Imperial and Provincial Engineers should be retained and that suitable provision should be made for the admission to the Imperial cadre of any Provincial Engineer who may show exceptional merit.

71,966. (VIII.) **Relations of the Service with the Indian Civil Service and other Services.**—The Public Works Department (being essentially a professional department) must remain, as at present, independent of the Indian Civil and other services.

the Calcutta University, while in the latter there were about 200 training for the Upper and Lower Subordinate ranks. The students all lived at the college in separate barracks, but did not mix in the college or the workshops. There was a common staff of teachers, but the routine was so arranged that the engineering students had their lectures in the morning and their practical work in the afternoon, while the apprentices had their practical work in the morning and their lectures in the afternoon.

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[Continued.]

The training of the two classes was not kept as separate as it was at Rurki, and he would like to see a more rigid separation of the students out of class hours so as to obtain a superior class of student.

71,969. It would be to the advantage of the Public Works Department if all who contemplated entering the superior posts were trained at a central college because he did not think Government obtains full value from the four Civil Engineering Colleges now maintained. If civil engineering was to be undertaken by an Imperial department, mechanical engineering, electrical engineering, mining and all higher technical education should be undertaken by the Imperial Government also, even though a central college was not established. The four colleges might be retained, each specialising in a separate subject. He desired to see the Imperial Government undertaking the highest training in all branches of engineering and higher technical training.

71,970. Apart from the students who entered Government service, a certain number became contractors or joined other firms, or went on to District Boards and municipalities, and a large number joined the subordinate ranks of the Public Works Department, some of them becoming, after five years' experience, District Engineers. All the students preferred to obtain Government appointments.

71,971. There was keen competition on the part of students to enter the college. The selection of students was left entirely to himself, and he selected them on their standing in the University examination. It was laid down in the rules that they must have passed the Intermediate examination in Science and have taken both chemistry and physics. An endeavour was also made to ensure that they had some knowledge of drawing. There were about 100 applicants for 40 vacancies.

71,972. His idea was that there should be not one central college but four colleges which he suggested might be devoted one to civil engineering, one to mechanical and electrical engineering, and one to mining, or there might be two colleges for civil engineering if one was not sufficient. The Provincial colleges should retain their present recruitment areas and admit students for a course of about two years. At the end of two years a qualifying examination should be held, conducted by the college authorities and then the students should be allowed to go to one of the special colleges for instruction in one or other particular branch of engineering. Each college would give a grounding in general engineering and would have a special branch of its own. The first two years' training would be of students within the province, but the specialised training would be open to students from all parts of India. It would be a four years' course altogether.

71,973. After the four years' course the students would have to obtain a year's practical training, which could be obtained in India. He did not think it would be possible to arrange for the practical training of students of Indian colleges in England as there were difficulties in the way of getting railways and firms to take them. There was a great deal more civil engineering enterprise going on in India than in England, and consequently a larger number of openings for practical training.

71,974. Students entering the Upper Subordinate Service did not require the same qualification as students going direct into the Provincial Service. The course for subordinates included more practical work in workshops; they were not taken up to the same theoretical standard as the Provincial Service students; the work was essentially practical so that they might be in a position to deal with the workmen they would have to direct. He saw no real objection to such students being trained in the same buildings as the engineering students if separate lectures were provided. In the same building there would be those who were training for the superior posts in their first two years; secondly, those who were specialising in a particular branch, and, thirdly, those who were training for the rank of overseer. It might be advisable to have a separate college for subordinates, but a much more efficient teaching could be obtained by having the students altogether.

71,975. There would be advantages in having the specialised training concentrated in one institution, but that would mean establishing a large technical University for the teaching of civil engineering, mechanical engineering, electrical engineering, mining, etc. Rurki was perhaps not sufficiently equipped for that work; he had not seen Rurki for 5 or 6 years and it might have improved much; but Sibpur might be made into a highly specialised training college if it were better equipped for dealing with larger numbers of students. If the numbers were small it would be almost possible for Sibpur to deal with them now, as the college had the finest workshops of any college in India.

71,976. He was in favour of retaining the division into Imperial and Provincial branches, but would promote exceptional Provincial Engineers to Imperial rates of pay. The education received by the Imperial man in England was in some respects sounder than that obtained in India, as in England a man started with a better educational foundation.

71,977. He proposed that the services of Indian officers in the rank of Assistant Engineers should be temporary and that only officers promoted to executive rank should be placed on the permanent cadre. That would enable the department to be contracted or expanded according to the work that had to be done and he did not think it would give rise to administrative difficulties, though it might raise further invidious distinctions as between Europeans and Indians.

71,978. A proportion of the men recruited to the Overseer grade might, after experience and practical training, be promoted to subdivisional posts.

71,979. He wished to see all Indians recruited in India and would abolish the present system under which 10 per cent. were recruited by the Secretary of State. The Government ought to encourage Indian engineering colleges as much as possible and not cast a slur upon them.

71,980. (Lord Ronaldshay.) Of the students in the higher class only one received an appointment in the Provincial Service every two years and most of the students had to accept posts in the subordinate service. The Public Works Department received a certain number of students, both engineering and subordinate, for training, and at the end of the period there was a practical examination conducted by the department with the assistance of a Professor from the college, and on the results of that examination appointments were made to the subordinate service. Although the two classes of students were trained differently they were eventually judged by the test of an identical examination. That a large number of B.E.'s sought employment in the subordinate grades was due to the fact that too many students were admitted to the University course. At present 40 were admitted, and he thought the number should be only 20. The evil was aggravated by the fact that neither Burma nor Assam ever offered any appointments in their Provincial Services to the students, probably owing to the fact that they did not desire to be hampered in their recruitment.

71,981. (Sir Theodore Morison.) He had never had any difficulty in obtaining one year's practical training for his students. There was a sufficient number of scholarships available for those who passed the examination and he arranged for their practical training either with the Bengal Public Works Department, or the Public Works Department of Bihar and Orissa or Assam, or with the Bengal-Nagpur Railway and the Eastern Bengal State Railway. The facilities offered by Government were usually sufficient, and it was only when a larger number of students passed that the railways were asked to take them. Students believed that if they went to railways they had not the same chance of obtaining employment under Government. At present the apprenticeship was only for one year and he wished to see it longer. A man was not an Engineer when he had finished his college course, and it was desirable that the apprenticeship should be for at least three years. That would treble the number of students under training at one time, but there would be no great difficulty in arranging for it. No Government Engineer now took pupils with a

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premium, but it would be an advantage if he did so, and the student would be willing to pay if he could not obtain training otherwise.

71,982. A scheme was being drafted for a school of mines and he was confident there would be no difficulty in arranging for practical training in mining, as the miners were anxious to get qualified men and would assist in training such men.

71,983. He saw no objection to all Assistant Engineers being employed on a temporary basis.

71,984. (Mr. Chaudh.) Rurki although it was allotted six posts provided for a smaller area than the other colleges, Sibpur having the largest recruitment area of any college in India.

71,985. (Mr. Sly.) The allocation of posts was made according to the number of vacancies in the Public Works Branch of each province, and probably Bengal had only one appointment, because there was one vacancy on the average every other year. He thought, however, Sibpur should have some consideration on account of its being the college for Burma, Assam and Bihar and Orissa. It was quite possible that some students from Rurki obtained appointments in those provinces.

71,986. Admission to the Sibpur College was limited to Indians and Anglo-Indians from a certain specified area, men from other provinces not being able to obtain admission to the college unless there was a vacancy which could not be filled from the provinces the college represented.

71,987. In Bengal six candidates were sent for one year's probation to the Public Works Department, the first six men on the list having a right to enter for a year's training as part of their college course. For the actual post the final selection was made by the Public Works Department on the result of the practical examination held at the end of the year.

71,988. The qualification for entering the college at present was the Intermediate Science examination. The length of the college course, combined with the increase in the practical training, created an age difficulty, and he wished to be allowed permission to refuse to admit to the college students over a certain age, whether they had read up to the B.Sc. or not, although that might exclude some good students. The educational qualification for admission could not be reduced. Suggestions had been made that the Matriculation should be the educational qualification, but if the standard of a boy passing Matriculation was compared with the standard of a boy entering an engineering college in England, it would be found that the Bengal student would be under very great disabilities, if Matriculation were made an educational standard for admission, because he had had no opportunity in the Bengal schools of specialising towards engineering, i.e., of learning higher mathematics, drawing, science or manual training. The Medical College a short time ago took boys with a Matriculation qualification and lengthened the college course, and in the result Intermediate Science men applied for admission to the Medical College, although the Matriculation examination was the standard, the result being that these lads had to stay a year longer at the Medical College than formerly. The college preferred the Intermediate Science candidate and selected him. The present system of training an Engineer entailed two college courses, the preliminary science course at an Arts or Science college and the final course at the Engineering College, but the standard of the Intermediate Science examination was no higher than the ordinary school leaving standard in England.

71,989. The final examination was conducted by the Calcutta University, which gave no credit for marks awarded at college examinations during the course. There was no physical test and no practical test in workshops, the latter being taken in the Intermediate examination. Of the admitted students about 11 a year passed in the final test. Six competed for Government posts and the remainder the railways were asked to accept. After practical training they had the opportunity of competing for subordinate posts in the Public Works Department, if they wished to take them.

71,990. (Mr. Fisher.) The main criticism he had to pass upon the candidates entering the college was

their insufficient training in drawing and elementary science. That education could be much better given in Sibpur to students of Matriculation age, but it would necessitate lengthening the course, and the Intermediate Science candidate would be still clamouring to come in for a five years' course, and it would be very difficult to resist the appeal. It was very desirable that a boy, who was being trained for an Engineer, should have a good training in drawing early in life and should be well grounded in science. He would like to catch the students at the Intermediate Science stage.

71,991. The system of combining practical training with theoretical training in a Sandwich system as obtained at some colleges in England was very suitable for mechanical and electrical Engineers, as it was easy to find works where everything was under one roof, but that could not be done with civil engineering. One or two students had gone into private works to study mechanical or electrical engineering during the vacation, but it was very exceptional to do so. The college itself offered a practical training, because there was a very large electrical installation which was maintained entirely by the students.

71,992. He wished to put all the higher technical education under the Government of India, because the outlook of Provincial Governments was limited to the needs of their province. The Bengal Government, for instance, had mining classes, and would develop them in regard to the needs of Bengal only. The present system meant multiplying institutions to such an extent that they would be neither efficient nor economic. There was an advantage in having all the training carried on in one institution, as it widened the outlook of the students, but for this an entirely new technical University for India would be required.

71,993. (Mr. Madge.) If the field of practical training was widened at Sibpur and it was possible to get firms such as Sir R. N. Mookerjee's to take some of the pupils for practical training, those pupils would probably obtain as good a practical training as they could get in the Public Works Department or even better. Opportunities existed for training in India, but they were not offered because Indians without exception preferred training under Government.

71,994. At present there were four colleges training Engineers in India, and he suggested that each of them should take up one branch of engineering only in their University classes. That would not mean that before a man could be an all-round Engineer he would have to go the circuit of all the colleges, because it was not necessary that a man should be a good Engineer in all branches of engineering. A student could be given a sufficient amount of general training in the two years he remained in the local college. A similar scheme was in force at Sibpur in connection with apprentices. There were a large number of "feeder" classes in Kurseong, Burdwan, Midnapore, Dacca, Ranchi and many other places, at which students were trained up to a certain stage, and when they reached that particular standard they were offered by the college a choice of civil engineering, mechanical and electrical engineering, and mining, and they could take a special course in either of those branches at the Sibpur College. That system worked very well. The man who went into the Public Works Department took the civil engineering branch, but at the same time he was getting a knowledge of mechanical work in the workshops.

71,995. The ideal would be to have one technical University teaching all branches of engineering, but if that was not possible, the existing colleges might be utilized for specialization in the various branches of engineering. He had put forward his proposal as one which was more likely to be sanctioned as Provincial Governments might not be willing to give up their high grade classes in engineering.

71,996. He did not think any difficulties would arise out of his proposal to employ Assistant Engineers on a temporary basis, as the men would know that after five years or so they would have an opportunity of becoming permanent, and they would do their utmost during the five years to become really efficient. He desired to get away from the principle of guaranteed posts. The system had rather a tendency at Sibpur to make the students study the syllabus with

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the object of seeing which were the most mark-getting subjects. They did not come to the college with the idea of becoming efficient Engineers, but with the idea of getting a particular post.

71,997. (Mr. Abdur Rahim.) The reason why he considered that Indians should not be recruited in England to the Imperial Service was because Government maintained colleges in India for the training of students for Government service, and students should go to those colleges rather than to England. If Indians went to England, they should give up the idea of getting into Government service. If Government maintained colleges and guaranteed to recruit the services from those colleges the guarantee should be adhered to. If the guarantee was abolished and the Bengal Government said they would appoint a Bangali to the Provincial Service, no matter where he was trained, the position would be much sounder, because every boy who came to the college would come to be trained as an Engineer and not for a place under Government. He would be selected for Government service on account of his efficiency as an Engineer, not on account of his facility in passing examinations. An Indian who had been educated in England might be accepted, if qualified, but there should be no guarantee of admission to the service. If he was equally qualified he should have an equal chance with others. In a central Imperial college he thought it would be possible to create a good social and professional atmosphere and to raise the students to the English standard without their going to England. No doubt England offered a better mechanical and electrical training, as methods there were more up-to-date and there were more extensive works.

71,998. With regard to the difficulty connected with the age of admission to the college, the only suggestion he could make was that no one should be admitted after the age of 19. There should be then a four years' course followed by a year of practical training, which would bring the age up to 24 as the maximum if the students passed through without failure.

71,999. About a fourth of the students in the college this year were B.Sc.'s and three-fourths Intermediate Science. Nearly all the students who applied for admission had already applied for admission to the Medical College or some other professional college, so that it could not be said they came to Sibpur with an inherent taste for engineering.

(The witness withdrew.)

O. H. DESENNE, Esq., Executive Engineer, Assam.

Written Statement relating to the Public Works Department.

72,002. (I.) **Methods of Recruitment.**—Imperial Engineers should be recruited by competition from a Central College in England and Provincial Engineers from one Central College in India.

72,003. (II.) **System of Training and Probation.**—Both Imperial and Provincial Engineers should undergo a year's training in India on some large work which is being carried out by departmental agency. The work need not necessarily be in the province to which the Assistant Engineer will be posted.

72,004. (III.) **Conditions of Service.**—The following recommendations are made:—

(1) That for the "Public Works Department" be substituted the "Public Works Imperial/Indian Service" and Provincial Engineers who reach administrative grades be absorbed in the Imperial Service.

(2) That free medical attendance be provided for the families of officers.

(3) That the travelling allowance rules be reconsidered, especially as regards (1) travelling by inland steamer, (2) expenses on transfer, (3) travelling allowance of Assistant Engineers.

(4) That administrative appointments be made and controlled by the Government of India.

(5) That the interest of Public Works Department officers be safeguarded against supersession by Royal Engineer officers.

(6) That the cost of the site for a residence shall be fixed without reference to its actual cost due to

72,000. (Sir Valentine Chirol.) The majority of Indians who went to England for training had already failed to obtain admission to one of the engineering colleges of India. The number of admissions to the colleges in India was strictly limited; for instance, Sibpur could only take 40 in an area comprising one hundred million inhabitants. Amongst those who were unable to get into Sibpur there might be very good men. His main point in objecting to English Engineering training for Indians was his desire to encourage education in India.

72,001. (Sir Murray Hamrick.) In England practically every student who went to an engineering college had to go through a four or five years' apprenticeship before he had the opportunity of obtaining work. If the same rule obtained in India, there would not be the same complaint about Indian-trained Engineers. At present a student on passing from the college thought that he knew quite enough to undertake at once well paid work and he did not realise his deficiencies. An undue value was placed upon the B.A., B.E., and S.Sc. certificates. Students had a very great objection to paying for their experience and also to accepting posts on low pay, arguing that if they accepted such posts it would be said that that was the market value they placed upon themselves, and that if their market value was that of an Overseer, they could hardly expect to receive larger pay afterwards. There was also a difficulty in connection with the students working in outside workshops where lower caste workmen were employed. This difficulty did not obtain in the college workshops. The inefficiency of the Indian Engineer was due in the main, first, to his objection to going in for a practical course; secondly, to the great difficulty of obtaining a sufficiently good practical course in works, and, thirdly, the unsuitable character of the preliminary training before they joined the engineering college. He did not think there was likely to be any very great improvement in those directions so long as the Matriculation examination of the Universities was the be-all and end-all of a student's school career. If there was an examination for students, who had been trained especially for industries, then he believed satisfactory material would be obtained. The opportunities already existed in India for a real practical training in works after students had left the college, but they did not take advantage of them.

local variations in the price of land or to special circumstances, and shall be a fixed percentage of the cost of the proposed residence.

(7) That Engineers shall obtain a reduction in the fees payable for the education of their sons in the Central Training Colleges if established in England or in India.

(8) Superintending Engineers like Conservators of Forests should be Heads of Departments (except in cases where they are under the orders of a Chief Engineer who is not a Secretary to the Local Government or Administration) as their responsibilities are at least as great. The Chief Engineer's duties would then not be differentiated from those of a Secretary to the Local Government or Administration.

(9) That temporary Engineers should not be placed in charge of permanent Public Works Division; they should only be employed in accordance with their designation in charge of temporary divisions or as technical experts and their functions should never be administrative.

72,005. (IV.) **Conditions of Salary.**—The pay of Provincial Engineers should be raised to $\frac{3}{4}$ of that of the corresponding ranks in the Imperial Service.

Provincial Engineers promoted to administrative grades should get the same pay as Imperial Engineers. The pay of Imperial Engineers has recently been increased, and a married officer can now only just manage to make both ends meet.

The attached (*vide* Annexure) shows the estimated percentages of expenditure of a married officer in the executive grades who regulates his expenditure

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in a rational manner under the existing conditions of service.

72,006. (V.) **Conditions of Leave.**—Proposed:—

(1) That the period of service qualifying for leave be reduced to 4 years.

(2a) That furlough allowance be $\frac{1}{2}$ of the average salary in India.

(2b) That furlough allowance be $\frac{1}{2}$ of the average salary out of India with a minimum of £300 for Imperial Engineers.

(3) That there should be the option of taking short—six months—leave out of India on full pay after four years of uninterrupted service—three months to be treated as privilege and three months as equivalent to six months' furlough.

(4) That twelve months' study leave in the whole service with the necessary safeguards and allowances be given, in addition to all furlough admissible under the rules.

(5) That privilege leave be assimilated to furlough in the matter of carrying on to an officer's credit leave which he is prevented by the exigencies of the service from taking.

72,007. (VI.) **Conditions of Pension.**—That pensions should be improved on the lines proposed in the petitions recently submitted by Imperial Engineers to the Government of India, but preferably in the case of new recruits pension should be replaced by a provident fund on the lines of the State Railway Provident Fund, officers subscribing a fixed percentage of their pay, to which Government should contribute an equal amount, the accumulations to be the absolute property of the subscribers and their heirs. On retirement an officer should have the option of withdrawing the accumulated amount of his own deposits and draw interest till his death on the balance, when it would be paid to his estate. In this way an officer will be certain of getting his pension or deferred pay and he will be able to make some provision for his family. For officers who are already in the service of Government a widow's pension of £100 a year should be allowed by Government.

72,008. (VII.) **Limitations in the Employment of Non-Europeans and the working of the existing system of division of Services into Imperial and Provincial.**—The number of Provincial officers as at present recruited is, owing to the laws of supply and demand, and market values, a measure of the inefficiency which the Government of India are prepared to condone; and the proportion of such officers must be determined accordingly. The fact that private

concerns find it necessary to employ the services of men whose qualifications correspond to those of Imperial Engineers, on a salary higher than that which the local supply of Engineers trained in Indian Colleges would be prepared to accept, proves this point.

The Imperial Service should be filled only by recruits appointed in England, facilities being given if necessary to Indians, in order to enable them to compete on even terms with Europeans.

72,009. (VIII.) **Relations of the Service with the Indian Civil Service and other Services.**—If this enquiry is directed to conditions of social intercourse—these are eminently satisfactory. The roads and buildings branch is however subjected to unfair criticisms owing to unsatisfactory results and delays which are often due to a course of action being pursued over which this Department is not at present in a position to exercise its veto. This Department is second to no other in its efficiency, but the scope of its functions is not generally understood and its position in relation to some of the other departments and services requires strengthening.

Annexure (vide 72,005).

	Per cent.
1. Medical attendance, including mid-wifery cases and medicines ...	2 $\frac{1}{2}$
2. General Provident Fund subscription ...	12 $\frac{1}{2}$
3. Income tax ...	2 $\frac{1}{2}$
4. Life Insurance ...	10
5. Provision for 9 months' leave (3 months' privilege and 6 months' furlough every six years, including passage) ...	10
6. House rent ...	10
7. Household expenses, including servants, food, furniture, clothes ...	40
	87 $\frac{1}{2}$

This leaves 12 $\frac{1}{2}$ per cent. for the club bill, education of children, purchase of horses or other means of conveyance, subscription lists and contingencies, and is inadequate.

The above applies to the average salary of the married officer drawing Rs. 1,000 per mensem, and those drawing less or more are comparatively worse or better off, as the percentages of some of the above items 4, 5, 6, and 7 need not necessarily be increased in direct proportion to the larger pay.

Mr. O. H. DESENNE called and examined.

72,010. (Chairman.) Witness had been in the service for 15 $\frac{1}{2}$ years. He represented about 17 Engineers, and his views generally represented those of the Imperial engineering service in Assam.

72,011. He proposed that Imperial Engineers should be recruited by competition from a central college in England, not because the present system of nomination by the Secretary of State had given unsatisfactory results; the suggestion was put forward chiefly on the ground of *esprit de corps*. In a department like the Public Works Department *esprit de corps* was a very valuable asset; and there was much apprehension that that spirit was gradually disappearing under the present system of appointments. There was also the question of the training of Indians in England, which seemed to present great difficulties. With the establishment of a central college those difficulties would disappear.

72,012. He suggested that all Indians, who were admitted into the Imperial Service, should be trained in England. He said that partly from the result of experience, and also from the point of view of market value. A Provincial Engineer with an Indian training drew, on an average, less in the open market than the home man with qualifications equal to those of the Imperial Engineer.

72,013. He had come in contact with Indians who had been trained in England, and they made much better Engineers than those trained in India. It was necessary that Indians should go to England to be trained.

72,014. He had but very little experience of Indian colleges, although he had had both Rurki and Sibpur men under him. Personally he preferred the men from Rurki.

72,015. He knew his view as to the inadequacy of training in Indian colleges was very different from that which had been put forward before the Commission by several responsible witnesses.

72,016. Assuming that Indians were to be trained in India, he considered that it would be advisable to have a central college, in preference to colleges in each of the various provinces, because the different races would be more blended together, and the rough corners would be sheared off more readily.

72,017. He recommended a year's training in India for both Imperial and Provincial Engineers, on work which was being done departmentally. There was a great deal of difference between work which the Public Works Department did by contract, and work which it did departmentally, where there were no contractors, and where the department looked into the details, and did the actual work itself. He agreed it was important that young officers should be placed on some big constructional work, and not on ordinary routine work. It was not always the case that big constructional work was put out to contract. The witness himself had carried out fairly big works departmentally. His reason of suggesting a year's training in India was that it gave a young officer the opportunity of coming into contact with men with whom he would have to deal for the rest of his service. It would also enable

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[Continued.]

him to learn the language and the various conditions of the country.

72,018. The present average age of men coming into the service was 25, which he thought was a little too advanced; 23 would be a very good average age.

72,019. He was strongly of the opinion that the interests of the officers in the department should be safeguarded against supersession by Royal Engineer officers. He thought the latter should come in at the bottom of the list, so as not to supersede those already in the service. At the present time Royal Engineer officers were placed over the heads of several civilian Engineers on the list. The complaint was not so acute as it had been in the past, and his colleagues were not complaining so much against what was happening at present; all they required was a safeguard against any revival of the past system. In Assam there were two Royal Engineer officers.

72,020. With regard to pension, the witness endorsed the proposals which had been put forward in the petitions recently submitted by the Imperial Engineers, but in the case of new recruits he recommended the replacement of pensions by a provident fund, which he thought was more satisfactory. Under the present system many Chief Engineers had died in harness, thereby losing their pensions. He would like to see a system in vogue similar to the State Railway Provident Fund. That, as at present organised, gave larger benefits than the present non-contributory pensions. His chief reason for putting forward the suggestion was that it would ensure some sort of provision for the widow of the officer. He thought for officers who were already in the service, Government should allow a widow's pension of £100 a year, in addition to the increased scale of pensions mentioned in the Imperial Engineers' petition.

72,021. (Sir Murray Hammick.) He suggested that administrative appointments should be made and controlled by the Government of India, because if promotions were made on one general list for the whole of India and men could be transferred to other provinces, it would minimise blocks in promotion, and neutralise differences in the rates of promotion due to separate sanctioned cadres for each province.

72,022. (Sir Valentine Chirol.) Questions coming within the purview of the Secretary to Government (Public Works Department) were very often dealt with to a certain extent by other departments. It was not a very crying abuse, or a matter of paramount importance, but at the same time it would strengthen the position of the Public Works Department if it was understood that all orders of the local administration regarding Public Works Department matters should be dealt with only by the Public Works Department. He did not agree that it would possibly strengthen the position of the Public Works Department at the expense of the Local Government; the Public Works Department was part and parcel of the Local Government; but it might strengthen the Public Works Department Secretary at the expense of other Secretaries.

72,023. (Mr. Madge.) He thought the establishment of a central college in India for Provincial Engineers was quite a practicable proposal. He would not abolish the existing Provincial colleges; he would have one central college for higher engineering, and let the local colleges remain for the lower engineering training. He agreed that there were other services, which were recruited otherwise than through a central college, which still retained their *esprit de corps*, but he did not think that spirit was quite so well developed as it would be with a central college.

72,024. In Assam the Public Works Department gave out a lot of work to petty contractors. There were very few large contractors. The department had the supervision of all work done.

72,025. The Secretariat of the Public Works Department was not strong enough. For instance, they were constantly told by the Secretary of State for India that they must not on any account purchase European stores locally. In the face of that, it was found that large quantities of European stores were purchased locally, and the Public Works Department was blamed.

72,026. The reason was there was a rush, the work had to be done, and there was no help for it under

the existing system. In many similar instances, very much against the wishes of the Public Works Department, rules had to be broken owing to the Public Works Department not being strong enough, e.g., "sanctioned amounts of schemes and projects being exceeded owing to their scope being widened under the orders of other departments." It was true that the Chief Engineer was Secretary to Government, but he had distinct duties as Chief Engineer, and distinct duties as Secretary. While he was Secretary on the one hand, on the other he was merely head of a department, whereas the other Secretaries were purely Secretaries and nothing else.

72,027. (Mr. Fisher.) The proposal that the pay of the Provincial Engineer should be raised from two-thirds to three-quarters of the pay of the Imperial Engineer was simply put forward as a concession to the Provincial Engineers. He did not wish to imply that in the case of the average Provincial Engineer the standard of living had risen in proportion to the increase of pay suggested. He proposed they should be paid something above the market rate, in order to produce more contentment in the service.

72,028. He thought the majority of the Assam Engineers were of the opinion that Englishmen coming out into the service should undergo a period of probation in India. That was not because they had had experience of the evils of the opposite system, of bringing out people and of not submitting them to any period of probation. He did not find that young men who came out from England without any knowledge of India maltreated their native subordinates. As a matter of fact, these officers were always kept under very strict supervision for the first year, simply being given opportunities of getting acquainted with the language and local conditions; they did not have much chance of getting into mischief, even if they were so inclined. He had had some experience of Indians who had been sent out from England, and he should say that they stood on a much higher level than Indians who had simply passed through the Indian colleges.

72,029. (Mr. Sly.) Government should have the right to reject an officer at the end of the year's probation, if it was found that his probationary training had not been satisfactory. It was possible that the chances of being thrown out of employment after a period of probation might affect recruitment in England, but he did not think it would interfere with Indian recruitment. If Government were to guarantee a return passage to a rejected candidate, the effect on recruitment in England would be much less. He would not be prepared to go a stage further, and say that all Engineers wishing to enter the Public Works Department should be, in the first place, recruited temporarily under a five or seven years' contract, and should then either go back to England, or be appointed permanently for service in India. It was much better to have a man permanently engaged from the very beginning. He had had experience of two Engineers who had been brought out for a period of years, and they had turned out very good men, but he did not think such a method of recruitment would be suitable for the Public Works Department. The objection to it would be that men would not go in for solid work, but would confine themselves to "eye-wash," and simply do superficial work which would strike the eye. The result would be that the more solid work of the department would suffer. He quite agreed it was the case that practically all engineering service, other than the engineering service of India, was on short-term contracts, but the work of the Public Works Department was quite different. There was a great deal of administrative work to be performed over and above the technical and detailed work. Over and above this there was no difficulty in the case of private firms in getting rid of undesirables, but in Government service a strong case of inefficiency would have to be made out before a short term contract man could be sent back.

72,030. The Assam Provincial Service was not recruited from Sibpur, but from Rurki. There was promotion from the Subordinate into the Provincial Service in Assam. This system worked very satisfactorily. He certainly would not desire to see it abolished.

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[Continued.]

72,031. (Sir Theodore Morison.) It was the fact that many men in the Public Works Department did pay as much as 10 per cent. of their salary for life insurance.

72,032. (Lord Ronaldshay.) The proposal made in the report of the conference held at Shillong to the effect "that the rule under which increments are withheld, if an officer does not obtain charge of a division, should be made inapplicable to cases where a divisional charge, or post equivalent to a divisional charge, is not available for an officer who has been reported fit for such a charge" was not included in the subsequent written statement because the witness had heard that the recommendation had practically

been given effect to. He would not be prepared to guarantee that that was the fact, but that was the reason why it was not put into the subsequent written statement.

72,033. (Mr. Sweet.) He insisted on the year's training in England for Indian-recruited Engineers, chiefly because of the wider outlook which they would obtain in this way. There mere fact of walking in a London street widened the outlook of an Indian.

72,034. (Mr. Watkins.) In his experience, an Indian trained in England was quite good enough for the Imperial Service. He agreed that a training at home was not the only requisite, but it certainly was one which was absolutely necessary.

(The witness withdrew.)

F. H. HODGKINS, Esq., District Engineer, Assam.

Written Statement relating to the Public Works Department.

72,035. (I.) **Methods of Recruitment.**—The superior grades of the department are recruited in four ways:—

(a) By importing recruits from England, including Royal Engineers.

(b) By appointment of the successful candidates from the Engineering Colleges in India who secure guaranteed appointments by open competition.

(c) By translating temporary Engineers, wheresoever secured, to the permanent list.

(d) By the promotion of selected officers from the subordinate grades of the Public Works Department.

Recruits from England are appointed by a Selection Committee at the India Office without competition. The annual recruitment from England has increased. The numbers during a series of years (*vide* the reply given in the House of Commons on the 19th April 1911) are as follows:—

1908	...	...	39
1909	...	...	30
1910	...	...	30
1911	...	...	23

Average 30.5.

The annual recruitment in India is approximately 14, viz., 9 for the successful candidates of the Indian Engineering Colleges and 5 for selected upper subordinates.

The proportion of recruits from England and India, respectively, is therefore 2 to 1, or of recruits from England and of the Indian Engineering College men, is as 7 to 2, that is say, only 23 per cent. of the annual recruitment (excluding promoted subordinates) is obtained from the Indian Engineering Colleges. In other words, 77 per cent. of the total annual recruitments is made by selection and only 23 per cent. by open competition. This proportion of recruitment for the Indian Colleges, which, be it remembered are institutions maintained at great cost to the State, is thus very small as compared to that from England.

This proportion of recruitment should be contrasted with that existing at the time of the Public Services Commission of 1886-87, and the recommendation of that Commission. It will be noticed (*vide* page 362 of Appendix O of the appendices to the report of that body) that the annual recruitment from England and the Indian Colleges was at that time in the proportion of 21 to 9, that is to say, the Indian Colleges received 30 per cent. of the annual appointments. It is, therefore, manifest that, notwithstanding the fact that the said Commission recommended a gradual increase in the number of appointments to be given to the Indian Colleges, by reducing the English recruitment, the reverse has been the practice.

It is my opinion that the legitimate aspirations of the public in this country cannot be satisfied unless a greater proportion of the superior appointments in the Public Works Department is reserved for competition in India. I would suggest as a suitable remedy that at least 50 per cent. of the total annual recruitments be made in India for the present, and that this proportion should be gradually increased as conditions change. I think, moreover, that of this

50 per cent., at least 10 men should be promoted by selection from the Upper Subordinate grades.

Again, as regards the system of recruitment in England, the method of selection should be discarded for a system of open competition. This system already prevails in India, and as an alteration I would suggest the creation of an Imperial College in place of the four existing provincial institutions. The advantages of this system are sufficiently obvious and need not be enlarged upon.

72,036. (II.) **System of Training and Probation.**—**TRAINING.**—(a) *Of Men recruited from England.*—There is no guarantee that the preliminary training obtained by these recruits is such as to meet the requirements of India. The training should be specifically directed to one special end, viz., the efficient performance of duties in India, and the curriculum should include one Indian language.

The only remedy is a special Engineering College, in which the desired training shall be given, similar to the Royal Engineering College at Cooper's Hill. But steps must be taken to ensure that the competition between candidates undergoing such training shall be real, that is to say, the appointments offered must not in any year exceed a fixed proportion of the competing candidates. A suitable arrangement would be that the appointments offered should not exceed one-third of the number of candidates.

This suggestion is not an unreasonable one, when considered with the conditions frequently prevailing in the Indian Engineering Colleges. For example, it has happened at Rurki that 18 to 25 candidates have competed for 5 or 6 appointments; again, at the Poona College of Science it has happened that no less than 40 to 50 candidates have competed for one single appointment.

(b) *Of Men recruited from Indian Colleges.*—The training imparted in these institutions is, I think, sound and fairly exhaustive. It is directed wholly and solely to the requirements of India, and the Government can, at any time, introduce any changes as may be required, since these institutions are maintained by the State. In addition, the Indian College Engineer has the advantage of receiving his training in the country in which he has to practice his profession.

PROBATION.—The training received by men from the Indian Colleges is further supplemented by a period of training on probation for one year in the Department, which is not the case with recruits obtained from England. This probationary period in the Department is necessary and should be insisted upon as an indispensable condition, and should be a period of probation in the strictest sense, involving selection and the possibility of rejection at the end of it. Any plea that this is unfair or will deter candidates from England, may be met by the provision of free return passages to rejected probationers. This, minus the free passage, is exactly what prevails at the present moment in the case of recruits from Rurki.

72,037. (III.) **Conditions of Service.**—The conditions of service between recruits appointed in England and India vary considerably, and this is the

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[Continued.]

cause of the great discontent which prevails among the latter class of officers. Notwithstanding the fact that both classes of officers are recruited for and required to do the same work, and bear the same responsibilities, the position of officers from England is more favourable in every respect as compared with that of the officers recruited in India. This policy which has prevailed since the date when effect was given to the recommendation of the Public Service Commission of 1886-87 has not, I think, been for the good of the Department.

72,038. (IV.) **Conditions of Salary.**—The pay of the Indian recruited element is approximately two-thirds of that granted to men recruited in England. This I consider is unfair. This distinction should, I think, be abolished and there should be no difference in pay between officers who do exactly the same work and have the same responsibilities.

72,039. (V.) **Conditions of Leave.**—Here again there is much disparity between the conditions prevailing, as regards both these classes of officers. Great stress has been laid on the advantage to be derived by an Engineer in visiting foreign countries; unless the conditions of leave are the same for both classes of officers, it becomes impossible for Indian trained men even if they desire to do so, to secure the same advantage in this direction as the English trained men.

Again, the nature of an Engineer's duties in the Public Works Department involves continued exposure and bodily discomfort for long periods, and the health of an Indian trained officer suffers equally with that of an imported man. There is, therefore, no reason whatever to perpetuate the present distinction. The Indian College Engineers should, therefore, receive exactly the same leave conditions as their contemporaries recruited from England.

72,040. (VI.) **Conditions of Pension.**—Here again there is an unfair distinction (*vide* Article 636, Civil Service Regulations), which will create invidious and unjust anomalies. For example, an Indian-trained Chief Engineer will draw less pension than his own subordinate recruited from England.

It is a well-known and universally established principle that pensions are granted as a retiring provision for specific services rendered to the State, and it is therefore illogical and unjust to create or maintain any distinction in this direction between persons who have in fact rendered exactly the same service to the State. In other words pensions ought to be wholly and solely dependent on specific services rendered and not on place of original recruitment for this does not involve any special merit.

72,041. (VII.) **Limitations in the Employment of Non-Europeans and the working of the existing system of division of Services into Imperial and**

Provincial.—(a) As argued above the Department should be recruited half from England and half in India, for the present.

(b) The separation of the Public Works Department into Imperial and Provincial sections is very undesirable when it is remembered that both classes of officers do exactly the same work and bear the same responsibilities.

The ultimate result will, in my opinion, greatly injure efficiency and already causes great discontent. The conditions of work and responsibilities being, as they are, equal in all respects, the confirmation of the differentiation in the matter of pay, &c., would not be fair.

It is therefore urged that Indian College trained men be restored to the position formerly occupied, that is to say, it should be one service, for all the Public Works Department. The proportion of Indians recruited both in India and England should, I think, not be changed.

72,042. (IX.) **Other Points.**—*System of appointing Temporary Engineers.*—This might be improved. At present these appointments are made from various sources, viz.:—

(a) Indian trained and qualified Engineers, who fail to secure guaranteed appointments when competing for them.

(b) Engineers imported from England under covenant.

(c) Unqualified persons appointed in India.

Except where special experts are required, Temporary Engineers' appointments should, I think, be filled solely from the Engineers of the Indian Colleges, and until such time as this source of supply is exhausted no unqualified persons should be entertained. Again there is considerable room for improvement in the conditions of service of Temporary Engineers. These officers are liable to be discharged with very limited notice, irrespective of the length of their service. I would suggest that such service be regarded as permanent non-pensionable, and should have a time-scale of pay, as is the case with Permanent Engineers.

Local allowances.—Indian recruited officers receive two-thirds of the local allowances granted to officers from England. This difference is not fair, for the said local allowances are always given for a specific purpose, that is, as compensation for local disabilities which equally affect both classes of officers.

Probationary period.—Not only have Indian trained officers to undergo a probationary period and thereby incur the consequent risk of rejection after receiving years of special training, which is not the case with imported officers, but even after completing such probation, the period so spent is not counted for promotion in the Department. This is a distinction which I think should be abolished.

Mr. F. H. HODGKINS called and examined.

72,043. (Chairman.) Witness had been 20 years in the service. His present position was that of District Engineer at Chittagong. He represented the only three provincial officers in Assam.

72,044. His view was that the division into Imperial and Provincial branches should be broken down, and he suggested that 50 per cent. of the total number of annual entrants to the superior engineering service should be recruited in India. He put that forward on the ground that Indian trained Engineer was as efficient as the European trained Engineer. Fifty per cent. was a sufficient increase on the present proportion. He thought that figure should be gradually increased as conditions changed. He meant by that, that if the 50 per cent. was adopted, and it was found to be a success, and the training in India went on being improved and the necessity for men from England was diminished, recruitment in India might be increased.

72,045. He recommended the establishment of an Imperial College in India in place of the four existing permanent institutions. He did not think a central college would have an adverse effect on recruitment from any of the provinces. He suggested the

absolute abolition of the existing institutions, as he thought the Imperial college could efficiently train both for the Imperial and Provincial Services, including the subordinate ranks. It would mean the college staff would have to be very much enlarged, but that the additional staff required could be transferred from the colleges which it was proposed to abolish. He thought it would be a suitable arrangement that all subordinate candidates from the various provinces of India should congregate at one central college. He did not think there was much objection in the fact that they would have to come from one end of India to the other to be trained. He would lay down a rule that candidates for entry to the proposed Imperial college, before competing for admission, should have graduated at the University of Calcutta or Allahabad, and that the subordinates should have passed the Matriculation examination. He would keep subordinates separate from the Imperial candidates.

72,046. With regard to pay, he considered it unfair that the salary of Indian recruited officers should be less than that of officers recruited in England, because the former did similar work, and under-

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[Continued.]

took the same responsibilities as the latter. He would not say that the market value varied as between the officer who came from a distance and the officer who was recruited in his own country. If the principle were laid down that something in the nature of a foreign service allowance should be granted to all European imported officers, it would be quite a fair arrangement. This foreign allowance should only be sufficient to cover the cost of the voyage to and from England when on leave, and if it were kept quite separate from salary, it would largely remove the present discontent.

72,047. He suggested that service as temporary Engineer should be regarded as permanent non-pensionable service; if temporary Engineers obtained a pension, he thought they would be more satisfied with that than with any other proposal. He agreed that it was better for temporary Engineers to be employed on fairly temporary work, and for strictly limited periods. There were no temporary Engineers in Assam, except when big works were being undertaken.

72,048. In regard to the establishment of a Family Pension Fund, he would like to see some arrangement by which a widow and the family could be provided for, and the pension earned by an Engineer not entirely lost in the event of his death.

72,049. As to leave, and the disparity between the conditions prevailing between the two services, he agreed that his proposal rather pointed towards the grant of greater facilities for study leave. At the same time he maintained that there should be no difference in leave earned by Indian recruited or imported Engineers. If privilege leave was earned and it so happened that a man could not take it, he should be allowed to accumulate it up to six months.

72,050. (Lord Ronaldshay.) The discrepancy between the statement in the written statement, that the annual recruitment from England had increased, and the figures, which showed that as a matter of fact it had decreased, was explained by the fact that he had taken the average for the four years mentioned, and had compared it with the average of another four years, some years ago. Paragraphs 3 and 4 of his written statement should be read in connection with these figures.

72,051. He did not think it would be reasonable to take the foreign service allowance into consideration when a man's pension was being assessed. That was the reason why he thought it should be called an allowance. While he would admit the reasonableness of granting men a foreign service allowance during the period of their service in India, he would only give them the same pension that the Indian recruited officer was entitled to. He did not suggest for a moment that the pay of a man recruited in England should be reduced, but that he should be given a foreign service allowance over and above what he was drawing at the present time.

72,052. (Mr. Sly.) He considered the present prospects did not attract sufficiently good men into the

Provincial Service, at least as regards Anglo-Indians. Despite the evidence given by the Principals of the colleges, namely, that there was great competition to enter the colleges, and that there was an ample supply of candidates of every kind, he still maintained that the service was getting unpopular.

72,053. (Mr. Fisher.) The principal reason of that unpopularity was that a man in the Provincial Service held charge of a division which he had probably taken over from an Imperial man, but was given a lower scale of pay. Moreover, it sometimes happened that an Imperial Assistant Engineer working under a Provincial Executive Engineer drew more pay than the latter. The same applied to Provincial Superintending Engineers and Imperial Executive Engineers.

72,054. The rates of pay offered by District Boards were higher than those enjoyed by the Provincial Service. It was not his view that a good young student from Sibpur or Rurki would prefer to be employed by a District Board than by Government, because in the latter case there was the advantage of a pension, and permanent employment, and to that extent Government service was more attractive than private service. He did not know whether it was the fact that the first man from Sibpur always accepted a Government appointment if he could obtain it.

72,055. (Mr. Madge.) Local requirements were very different from requirements in England. The locally trained man had the advantage of being thoroughly acquainted with the language, he could get along with his labour better, and he knew the habits of the Indians much more intimately than a man who had just come out from England. For a year at least, a recruit from England could not be very useful. As far as the qualifications of men recruited in England were concerned, there was nothing to complain about; it was simply that the conditions under which they had to work in India were quite foreign to those to which they had been accustomed in England.

72,056. The members of his service would be willing, he thought, to have their furlough reduced, if they could get six months' privilege leave on full pay.

72,057. (Sir Murray Hammick.) The witness was recruited to the department from Rurki 21 years ago. He did not know how many other officers were recruited from Rurki in that year.

72,058. (Mr. Sweet.) The scale of pay of Provincial Engineers was quite insufficient, and this grievance was aggravated when for the same duties and responsibilities Imperial men received more pay. He did not think his proposal, if acceded to, would eventually saddle the country with an engineering service paid very much in excess of what was really necessary.

72,059. (Mr. Watkins.) He passed into the service from the upper subordinate ranks. After a period of work as an upper subordinate, he was promoted, under the existing rules, to the Provincial Service. He was not trained as an Engineer in Rurki.

(The witness withdrew.)

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Mr. L. W. LEWIS.

[Continued.]

At Calcutta, Wednesday, 7th January, 1914.

PRESENT :

THE RIGHT HON. THE LORD ISLINGTON, G.C.M.G., D.S.O. (Chairman).

THE EARL OF RONALDSHAY, M.P.

SIR MURRAY HAMMICK, K.C.S.I., C.I.E.

SIR THEODORE MORISON, K.C.I.E.

SIR VALENTINE CHIROL.

MAHADEV BHASKAR CHAUBAL, Esq., C.S.I.

ABDUR RAHIM, Esq.

WALTER CULLEY MADGE, Esq., C.I.E.

FRANK GEORGE SLY, Esq., C.S.I.

HERBERT ALBERT LAURENS FISHER, Esq.

And the following Assistant Commissioners:—

H. H. GREEN, Esq., Superintending Engineer, Bengal.

SHASHI BHUSHAN MAZUMDAR, Executive Engineer, Bengal.

B. M. SAMUELSON, Esq., Executive Engineer, Burma.

R. R. SCOTT, Esq. (Joint Secretary).

L. W. LEWIS, Esq., Executive Engineer, Burma.

*Written Statement relating to the Public Works Department, being the corporate opinion of Officers in Imperial Service of the Public Works Department in Burma:—

(i) Recruited from the Royal Indian Engineering College, Cooper's Hill and (ii) Appointed by the Secretary of State for India.

72,060. (I.) Method of Recruitment.—The present system of selection from qualified applicants should be continued. Candidates for appointment should have taken the Honours Degree or Diploma of some recognised Engineering College and should be required to obtain a nomination from the Head of their College. There would be no limit to the number of these nominations and final selection would be made by a Selection Committee. The present age limit is suitable.

A Special Selection Committee should be appointed annually to deal with applications for appointments to be made that year. At least one-third of the members of this Committee should be senior Officers of the Indian Public Works Department either still on the active list or only recently retired. Candidates rejected should not be eligible for appointment in subsequent years.

Special attention should be given to the general character and social qualifications of the candidates in order to fully maintain the high standard of the Department. Such special qualifications are essential for Officers who will be required to deal extensively with the other departments both Civil and Military and to command the trust and respect of the Natives of the country.

In order to assist the Selection Committee in choosing the candidates most likely to fulfil the special requirements of the Indian Service the Heads of Colleges should be asked to submit to them a confidential report on the general character and special qualifications of each candidate nominated by them.

72,061. (II.) System of Training and Probation.—A period of training on works in England is not of much value and should not be insisted on. The conditions under which work is carried out in India are so entirely different that it is better to give every officer appointed in England one year's training on works in India after appointment so that he can learn Indian conditions and study the vernacular language.

* The statement was signed by Mr. F. St. G. Manners-Smith and Mr. G. C. Stawell, for Officers representing Imperial section from Coopers Hill, and by Mr. R. Stanley Baker, for Officers representing Imperial section appointed by Secretary of State.

It is not advisable to introduce a period of probation after appointment owing to the practical difficulty of making such a safeguard an effective one, while its introduction would probably have an adverse effect on the recruitment.

The Departmental professional examination provided for by Public Works Department Code, Volume I, paragraphs 167 to 169 should be made a thorough practical test of Departmental efficiency and there should be no hesitation in stopping the increments of an officer who is unable to pass this examination satisfactorily within three years of joining his appointment.

72,062. (III.) Conditions of Service.—The rule contained in Article 649, Civil Service Regulations, requiring all officers of the Public Works Department to retire on attaining the age of 55 years should be rigidly enforced and extensions of service beyond this age should not be given in appointments against the Cadre as such extensions block the promotion of other deserving officers.

All officers who on reaching the age of 50 years have not attained to the rank of Superintending Engineer should be compulsorily retired under Civil Service Regulations, Article 649, unless they are reported as fully qualified for the post of Superintending Engineer.

No Chief Engineer should be permitted to retain the same appointment for more than five years.

According to the present rules introduced with the incremental scale of pay, an officer of the Imperial Service cannot draw more than Rs. 800 per mensem unless he is in charge of a Division or a charge which in the opinion of the local Government is of equal importance. It seems unjust that the increments of an officer under the incremental scale of pay should be stopped owing to a block in promotion caused by errors of recruitment. The rule should be altered to the effect that an Officer of the Imperial Service cannot draw more than Rs. 800 per mensem unless in charge of a Division or reported on as qualified for the charge of a Division. As the rules now stand it seems that a fully qualified officer of ten years' service for whom no Division was available would not only lose an immediate increment but would also lose service for future increments.

72,063. (IV.) Conditions of Salary.—In 1908 the pay of the Public Works Department was re-organised and placed on an incremental scale but at the same time the Exchange Compensation Allowance formerly given to Officers of this Department was withdrawn so that the actual increase then made in the emoluments of the Department was not nearly so large as

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Mr. L. W. LEWIS.

[Continued.]

it appeared to be as is shown in the tabular statement below—

Year of Service.	Old Grade Pay.	Ditto including Exchange Compensation Allowance.	Present Incremental Pay, 1908.	Net increase given by 1908 Scheme.
	Rs.	Rs.	Rs.	Rs.
1	350	372	380	+ 8
2	350	372	420	+ 48
3	350	372	460	+ 88
4	450	478	500	+ 22
5	450	478	540	+ 62
6	450	478	580	+ 102
7	450-550	474-584	620	+ 102+36
8	550	584	660	+ 76
9	550	584	700	+ 116
10	550	584	750	+ 166
11	550	584	800	+ 216
12	700	744	850	+ 106
13	700	744	900	+ 156
14	700	744	950	+ 206
15	700-850	744-908	1,000	+ 256+97
16	850	908	1,050	+ 147
17	850	908	1,100	+ 197
18	850	908	1,150	+ 247
19	850	908	1,200	+ 297
20	1,000	1,062	1,250	+ 188
23	1,050	1,116	1,250	+ 184
27	1,100	1,169	1,250	+ 81
Administrative Grades.				
S.E., 3rd	1,500	1,594	1,500	— 94
S.E., 2nd	1,750	1,850	1,750	— 100
S.E., 1st	2,000	2,125	2,000	— 125
C.E., 2nd	2,500	2,656	2,500	— 156
C.E., 1st	2,750	2,922	2,750	— 172

The continued rapid increase in the cost of living both in India and in England indicates that it will not be long before a further revision of the scale of pay will be necessary.

Under the old scale of pay Executive Engineers, 1st grade, could be granted two increments of Rs. 50 on completing four and eight years, respectively, in that grade thus raising the maximum pay of an Executive Engineer to Rs. 1,100 obtainable after not less than 27 years' service.

Under the incremental scale of pay introduced in 1908, the increments of an Executive Engineer cease after the 20th year although he is not likely to attain the rank of Superintending Engineer till he has completed at least 25 years' service. Executive Engineers of over 20 years' service should be given biennial increments of Rs. 50 counting from the date of the last increment and subject to the maximum limit of Rs. 1,400 which would be reached after completing 25 years' service. These special increments should be conditional on the officer being reported as qualified for promotion to Superintending Engineer rank, but the grant of the increment would not give the officer any prior claim to such promotion.

In the case of Administrative grades the re-organization scheme of 1908 actually entails an appreciable reduction in the pay and allowances attached to these appointments owing to the withdrawal of Exchange Compensation Allowances. The pay of the Administrative grades in the 1908 scheme are identical with the revised scale of pay for these grades that was introduced in 1905. In Government of India Resolution No. 471 E., dated the 30th April 1906, Exchange Compensation Allowance in the administrative grades was withdrawn from all officers appointed to the Department in and after the year 1907, while Government of India Resolution No. 675-694 E., dated the 24th April 1908, states, "No change is made in the pay of officers of administrative rank, as sanctioned in Resolution No. 1101 E., dated the 25th August, 1905, but Exchange Compensation Allowance will not be admissible on promotion to that rank of officers who, on the 8th March 1908, were below the rank of Executive Engineer, 1st grade. As promotion to Executive Engineer, 1st grade, required at least 19 years' service under the old time scale, this is equivalent to withdrawing Exchange Compensation Allowance in the Administrative grades from all officers appointed to the Department after 1888,

without the withdrawal being compensated by any increase in the pay of these grades.

Therefore so far as officers who joined the Department between 1889 and 1907 are concerned, the pay and allowances of all the administrative grades was actually reduced by 6½ per cent. by the re-organization scheme of 1908.

The policy of gradually eliminating Exchange Compensation Allowance has much to recommend it, but at the same time it is strongly urged that the withdrawal of this allowance should have been arranged so as not to cause any actual reduction in the pay and allowances of these appointments.

It is recommended that in view of the discontinuance of Exchange Compensation Allowance the pay of the administrative grade should be revised to the following amounts:—

Superintending Engineer, 3rd grade, Rs. 1,600 per mensem.

Superintending Engineer, 2nd grade, Rs. 1,900 per mensem.

Superintending Engineer, 1st grade, Rs. 2,200 per mensem.

The duties of first and second grade Chief Engineers are generally identical, and there should, therefore, be only one grade of Chief Engineer on Rs. 3,000 per mensem. The Local Allowances attached to the posts of Secretary to Local Governments under Government of India Resolution No. 1101 E., dated the 25th August, 1905, might then be withdrawn.

The principle is already laid down in paragraph 80, Volume I, Public Works Department Code, that promotion to the Administrative ranks should be by a strict system of selection as opposed to that of seniority and it is recommended that this principle be even more closely followed than it is at present.

72,064. (V.) Conditions of Leave.—The leave rules applicable to officers of the Public Works Department appointed by the Secretary of State are practically identical with those which apply to members of the Indian Civil Service and Military Officers subject to the Civil Leave rules; but this equality does not extend to maximum and minimum leave allowances. In the case of officers of the Indian Civil Service and Military Officers subject to the Civil Leave rules, furlough allowances are subject to a minimum limit of £500 per annum, or the salary last drawn whichever is less and a maximum limit of £1,000 per annum, whereas for Officers of the Public Works Department there is no minimum limit for furlough allowances (except that in the case of furlough on Medical Certificate or on account of ill health there is a minimum limit of £200 a year (under Civil Service Regulations, Article 320) and the maximum furlough allowance is limited to £800 per annum. Under the present rules the amount of furlough pay for an Imperial Officer of the Public Works Department is accordingly limited as follows:—

Years of completed Service.	Maximum furlough pay per annum.
8	254
9	297
10	316½
11	337½
12	360
13	382½
14	405
15	427½
16	450
17	472½
18	495
19	517½
20	540
21	555
22	562½
3 years as Superintending Engineer, 3rd grade.	675
3 years as Superintending Engineer, 2nd grade.	787½
3 years as Superintending Engineer, 1st grade.	900*

The furlough pay is at present so low that married officers frequently cannot afford to take the furlough

* Subject to the present maximum limit of £800 per annum.

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due to them, although it would generally be to the interest of Government that they should take such leave at fairly frequent intervals. This is covered by the last paragraph of the memorials recently submitted praying for improved Pension and leave allowances and which it is understood have been referred to this Royal Commission, viz.—"Thirdly that the leave allowances sanctioned for officers of the Indian Civil Service and Military Officers subject to the Civil Leave Rules may be extended to your petitioners' Service."

There does not appear to be any valid reason why all Imperial Officers in the Public Works Department should receive less favourable leave allowances than those granted to Military Officers serving in the Public Works Department, Police and other Departments. A minimum of £400 per annum or the pay last drawn whichever is less, is the lowest figure at which the minimum furlough allowance for the Imperial Service of the Public Works Department should be fixed in order to remedy the present conditions under which many officers are either unable to take the furlough which they have earned or else run into debt by doing so.

The maximum limit of £800 per annum only comes under operation for senior first grade Superintending Engineers and the cost of increasing this limit to £1,000 would entail very little extra expense and would place these senior Administrative Officers on the same footing as Indian Civilian and Military Officers of similar rank.

The many vexatious restrictions now in force regarding the grant of leave should be removed and the amount of leave due to an officer should be the total amount earned less the amount already taken.

Some proposals to this effect are at present being considered by the Government of India but they do not extend to Privilege Leave. At present the Privilege Leave earned is one-eleventh of the active service subject to the restriction that no further privilege leave can be earned while there is three months such leave due. This restriction should be removed entirely as also the rule that not more than three months' privilege leave can be taken at one time. If all these restrictions were removed the rules would be as follows:—

(i) The amount of privilege leave earned is one-eleventh of the total period spent on active service.

(ii) The amount of privilege due is the total amount earned less the total amount already taken.

(iii) The amount of furlough earned is one-fourth of the total period spent on active service or privilege leave.

(iv) The amount of furlough due is the total amount earned less the total amount already taken.

(v) Subject to the maximum limit of two years, leave due can be combined and taken to any extent at any time that an Officer can be spared provided that not more than 20 per cent. of the total Cadre can be absent on ordinary furlough at the same time.

The proposal at present under consideration to commute part of the furlough earned into half the amount of leave on full pay would be a valuable concession to those Officers who cannot at present afford to take more than a fraction of the furlough due to them, but the alterations and concessions already suggested would considerably reduce the demand for this new form of leave.

Study leave should be admissible for Officers of the Public Works Department on the same lines as the study leave now given to the Indian Medical Service. Engineering is a high scientific profession and it would be to the interests of Government to offer such special facilities to Public Works Officers to enable them to study the latest developments and most up-to-date methods of European practice.

In order to place officers serving in all parts of the Province on a more equal footing as regards leave and to admit of subsidiary leave being abolished, an Officer returning from furlough should be on duty again as soon as he reports himself at the Rangoon Secretariat. He will then be entitled to joining time on full pay and travelling allowances under the ordinary rules to whatever station he may be posted to.

72,065. (VI.) Conditions of Pension.—During the last 25 years the pay of the Department has been

improved from time to time to meet the altered conditions of the value of the rupee and the cost of living; but although the cost of living in England has also greatly increased the pensions are still subject to limits that were fixed in 1884. The maximum limit of Rs. 5,000 still in force was fixed in 1864 when the sterling equivalent was £500. As pensions are now payable at 1s. 9d. the maximum pension of Rs. 5,000 is only worth £437 10s. per annum. The maximum possible pensions for officers joining the service after 1898 have been still further reduced by the withdrawal of the extra pension of Rs. 2,000 for three years' service as Chief Engineer and the limiting of the extra pension of Rs. 1,000 to three years' service as Superintending Engineer, first grade, or Chief Engineer, while it was formerly open to all grades of Superintending Engineer; and for officers entering the service after 1909 the additional pension is subject to the further condition of 28 years' total qualifying service. In the case of the Forest Department an additional pension of Rs. 1,000 per annum can be earned by three years' service as Conservator without and restriction as to grade.

It is hardly surprising therefore that the Officers in the Department are very dissatisfied with the present inadequate pension and that memorials on this subject have been submitted to the Government.

The scale of pension laid down in Article 641 of the Civil Service Regulations is quite liberal but the scale is rendered entirely inoperative by the low maximum limits that are fixed and which are in many cases even considerably lower than the maximum limits fixed by Civil Service Regulations, Article 474, which applies to Officers in the Provincial Service and others subject to the Indian Service Rules.

The following examples are sufficient to prove this:—

Years of completed Service.	Civil Service Regulations, Article 641.		Civil Service Regulations, Article 474.	
	Scale of Pension, amount.	Maximum limit.	Scale of Pension, amount.	Maximum limit.
(Imperial Service at present scale of pay.)	Rs.	Ra.	Rs.	Ra.
10	2,813	1,000	1,406	2,000
12	3,570	1,800	1,920	2,400
16	5,200	3,000	3,200	3,200
19	6,670	3,000	4,370	3,800
24	7,500	4,000	6,000	4,800
or over	7,500	—	or over	—
25	7,500	—	7,500	—
to	to	5,000	to	5,000
30	16,500	—	16,500	—

Retiring pensions should be granted in sterling at the rates suggested in the latest memorials on the subject, viz.:—

Ordinary Pensions.

On completing—	£
20 years' service	350
21 years' service	380
22 years' service	410
23 years' service	440
24 years' service	470
25 years' service	500
26 years' service	540
27 years' service	580
28 years' service	620
29 years' service	660
30 years' service	700

Special Service Pensions.

Secondly, that as in accordance with the orders of the Government of India Officers are appointed to the administrative grades entirely by merit, an additional special service pension of £40 per year of completed service be accorded to Officers in those grades, subject to a maximum total pension of £940 per annum.

Any period spent on practical training in England should count as service for pension up to the limit of

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one year. The amount of furlough counted as qualifying service for pension should be as follows:—

Not less than—	
15 years' total service, 1 year	} Furlough to count as service for pension.
20 years' total service, 2 years	
25 years' total service, 3½ years	
30 years' total service, 5 years	

Invalid Pensions.—No proposals regarding invalid pensions are made in the memorials submitted from this Province. The following scale of Invalid Pensions should be adopted:

Years of Completed Service.	Scale of Pension as per Civil Service Regulations, Article 641. (Proportion of average emoluments.)	Maximum limit as per Civil Service Regulations, Article 474.
10	20-60ths	Rs. 2,000 a year.
11	21-60ths	2,200 a year.
12	22-60ths	2,400 a year.
13	23-60ths	2,600 a year.
14	24-60ths	2,800 a year.
15	25-60ths	3,000 a year.
16	26-60ths	3,200 a year.
17	27-60ths	3,400 a year.
18	28-60ths	3,600 a year.
19	29-60ths	3,800 a year.

These pensions being paid in sterling rates at 2s. to the rupee as asked for in connection with retiring pensions.

72,066. (VII.) Such limitations as may exist in the Employment of Non-Europeans and the working of the existing system of division of Service into Imperial and Provincial.—At present the recruitment of Natives of India in England to the Imperial Service of the Public Works Department is understood to be limited to 10 per cent. of the appointments. The time for the increase of this percentage has not yet arrived.

Natives of India do not as a rule possess that personality and strength of character combined with adaptability and ability to take responsibility which is as necessary in the Imperial Service of the Public Works Department as in any other branch of the Public Service. Mere ability to pass examinations is not the only qualification required in recruits for the superior service of the largest spending department of the Government of India.

The Provincial Service.—As regards the Provincial Service it is understood that this service is primarily intended for Natives of India educated in India whose cost of education and subsequent cost of living and general expenses are considerably less than those of an Imperial Officer domiciled in England. There appear to be good reasons for such officers receiving a lower rate of pay than officers appointed in England and the Provincial Service should be continued in practically its present form.

It has been found impossible in practice to keep separate "listed posts," for officers of the Provincial Service and consequently Provincial Engineers are often placed in charges previously or subsequently held by Imperial Officers. The Provincial Service asserts that officers doing the same work should receive the same rate of pay but the same argument might be applied also in the Imperial Service when an Executive Engineer on Rs. 800 has to take charge of a Division formerly held by an officer drawing Rs. 1,250 per mensem! Although Provincial and Imperial Officers do in practice often hold the same charge at different times it does not necessarily follow that the duties are as efficiently discharged by the Provincial Officer as by the Imperial Officer and it is maintained that as a general rule the services of the Imperial Officer are of greater value to Government.

72,067. (VIII.) Relations of the Service with the Indian Civil Service and other Services.—The relations of the Public Works Department with other Departments are at present satisfactory and no change in this respect appears necessary. It is very desirable that the existing independence of the Department should be maintained.

It may be remarked, however, that there is a strong feeling among Executive Officers that the recent amalgamation of the Public Works Accounts Department with the Civil Accounts Department has resulted in a considerable increase of the office work of an Executive Engineer without any corresponding gain in the efficiency of the audit.

The new procedure has not yet passed beyond the transitory stages and it is hoped that means may still be found to reduce rather than increase the time which an Executive Engineer has to devote to accounts work; as all time so spent reduces that left available for the even more important duty of frequent inspection of works, which is the only real safeguard against extravagant and unproductive expenditure.

72,068. (IX.) Any other points within the Terms of Reference to the Royal Commission not covered by the preceding Heads.—*Temporary Engineers.*—It may be necessary to resort to the appointment of temporary Engineers, in order to provide for a temporary increase in establishment required for the construction of large new works or other special causes but such temporary Engineers should not be looked upon as a source of recruitment for the permanent service. The appointment of temporary Engineers to the permanent service any where above the bottom of the list appreciably affects the prospects of the officers below them on the list who were recruited in the ordinary way and thus causes discontent.

Burma Allowance.—The recommendation of the Special Committee appointed in 1910 to report on the subject of Burma Allowance should be given effect to. The report referred to proves that the present Burma Allowance is not sufficient to meet the extra cost of living in Burma as compared with India and that Burma Allowance should be paid to all grades of the service.

The old rule (Note 2 (b) of Appendix 19, Public Works Department Code) that the aggregate of salary plus the local allowance of Rs. 100 shall not in future exceed Rs. 1,100 was made about 1887 when the pay of a 1st grade Executive Engineer was Rs. 950 and it was apparently intended that the allowance was to be admissible to all Assistant and Executive Engineers but not to officers holding higher rank and therefore the limit should have been increased when the maximum pay of an Executive Engineer was increased to Rs. 1,250 in 1908. In the Forest Department, who are on an identical incremental scale, Burma Allowance is given to all officers below the rank of Conservator. This means that the maximum pay and allowance of a Deputy Conservator of Forests serving in Burma is Rs. 1,250 + 100 = Rs. 1,350 while that of an Executive Engineer is Rs. 1,250 only.

Pending the decision on the general question of Burma Allowances the present allowance should be given to all Assistant and Executive Engineers and the rules should be altered to give effect to this with retrospective effect from 1st April, 1908, the date on which the incremental scale of pay came into force.

This particular grievance of the Senior Executive Engineers was represented to the Government of India in 1908 but no decision in the matter has yet been arrived at. In the mean time an Executive Engineer receives only Rs. 50 Burma Allowance in his sixteenth year of service and then ceases to draw any allowance at all, while officers of the Forest Department in Burma continue to draw the allowance until they are promoted to the rank of Conservator.

House rent and House allowances.—Subdivisional Officers in the Public Works Department stationed elsewhere than at the Headquarters of the Division should receive rent free quarters in the same way as Subdivisional Officers of the Indian Civil Service and Civil Police. The Rangoon House Allowance Scheme is at present restricted to married men, and bachelors receive no compensation for the high house rents in Rangoon. The scheme should be extended so as to include bachelors and married men whose families are not in Rangoon, the allowance admissible being limited to the amount by which the house rent actually paid by them exceeds 10 per cent. of their pay.

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Travelling Allowances on Transfer.—The Travelling Allowance admissible under the present rules is quite inadequate in cases of transfer and it is generally recognized that a transfer involves considerable loss to the officer concerned in almost every case. A transfer thus comes to be looked upon as a punishment involving a fine of greater or less amount according to the circumstances of the case. The necessity for special liberal rules to regulate the travelling allowances of gazetted officers transferred in the interests of the public service was brought to the notice of the Government of India in 1906 by the Government of Bengal but the matter appears to be still under consideration. The proposals made by the Government of Bengal in 1906 should be adopted and incorporated in the Civil Service Regulations.

Family Pension Fund.—It is very advisable that there should be some form of Family Pension Fund for the Public Works Department and such a fund on the lines of the Indian Civil Service Family Pension Fund or the Indian Army Family Pension Fund

should be introduced. Probably several other Departments such as the Forest, Telegraph and Police, could be included in the same Family Pension Fund Scheme.

General Provident Fund.—This fund should be made more elastic as regards the amount that can be deposited, there does not seem to be any particular reason why the amount that can be subscribed to this fund should be limited to 12½ per cent. of the salary of an officer, or why the percentage which an officer subscribes should not be allowed to be altered from time to time in accordance with the wishes of the subscriber.

Examination in Burmese.—At present Public Works Department Officers have to pass the examination which is primarily set for officers of the Civil Service and Police Departments and no attention is paid to the special requirements of the Public Works Department. To remedy this officers of the Public Works Department appearing for an examination in Burmese should be given a special paper set by an officer of the Department.

Mr. L. W. LEWIS called and examined.

72,069. (Chairman.) The witness said he was a member of the Imperial branch of the Public Works Department, Burma, and represented the whole of the officers of that branch. The written statement embodied the general feeling of the service.

72,070. He considered the present system of recruitment should be continued, and emphasised the necessity of nomination in order to secure qualities that possibly would not be obtained by open competition. An examination was not very necessary if people had the proper qualifications and were carefully selected. Candidates should have an Honour Degree. The best age for recruitment was twenty-three to twenty-four, but no harm would be done by raising the age limit. A man a little older than twenty-four would still be young enough to assimilate Indian conditions and would come out with a more developed character.

72,071. The officers he represented believed the best field for training was in India, but his personal opinion was that a year in England would be preferable. The year he had spent on works in England after leaving Cooper's Hill was of enormous value to him. It was important that a recruit should make himself acquainted with Indian conditions, language, and so on, but he did not favour a probationary period in India, as possibly men would not be obtained if they had to undergo a probation in the country.

72,072. From the point of view of the efficiency of the service it would be better to reject an unsuitable man at the earliest possible date, but that might bring the service into disrepute with the colleges in England and might be detrimental to recruitment, because men would not come out with the possibility of being sent back as failures. A possible alternative to probation would be to engage men temporarily on a five years' agreement. It was the general procedure in the engineering profession for men to leave England on term agreements, and if they were satisfactory and their services were still required the agreement was generally extended.

72,073. In Burma there were no officers in the Provincial Service who had reached the top of the list of executive engineers, so that he was not in a position to say whether officers had failed in due course to get promotion to the rank of Superintending Engineer.

72,074. The recommendation in the written statement that no Chief Engineer should be allowed to retain the same appointment for more than five years was based on the rule in the code. A Chief Engineer had to retire at the age of fifty-five and it sometimes happened that he only had a year or a year and a half as Chief Engineer. It was very seldom that officers attained to that rank before the age of fifty.

72,075. The suggestion that after an executive engineer reached Rs. 1,250 he should continue to draw further increments of Rs. 50 up to a maximum of Rs. 1,400 after twenty-five years' service was put

forward as a kind of solatium for non-promotion. In the old days when a man had been executive engineer for five years on the same pay he was given an increase, and a further increase after the next five years. The system was designed to compensate for blocks in promotion. It was really a personal allowance over and above the pay he was qualified to receive for the work he was discharging and was only given to men who although qualified for promotion to Superintending Engineers, were unable to obtain promotion.

72,076. Under present conditions officers were frequently unable to take privilege leave or furlough when they had earned it. There was a good deal of difficulty in obtaining privilege leave owing to the smallness of the cadre and the pressure of work; and officers could not afford to take furlough, especially married officers who had their families in England. The furlough pay after eight years was regarded as insufficient. Study leave should be granted under rules similar to those of the Indian Medical Service. At present officers were not taking study leave to any extent. If a man desired to study any particular question he had to be placed on deputation, but regulations should be introduced with the specific object of affording officers opportunity for study and bringing themselves up to date.

72,077. There were a great many officers who intended to take advantage of the twenty years' rule for retirement and some had already done so. From the point of view of the Public Service, possibly twenty years was too short a period of service to qualify for optional retirement, but if a man could obtain work in England it was to his benefit in many cases to retire after twenty years. The officers would like to retain the twenty years rule even though an improvement in pension was granted. The rule was a great inducement to men to join the department.

72,078. (Sir Murray Hammick.) With regard to bringing men out on terminal agreements, the fact that the best men were kept on in the service would not mean that the others were discharged with any reflection on their capacity. The men would be brought out for a large programme of work and when the work was completed they would not be required any further. It would mean bringing out many more men than could possibly be kept on the service.

72,079. (Sir Valentine Chirol.) If the system of terminal contracts was adopted there might be a considerable reduction in the permanent establishment of the department. In Burma there were not nearly enough men to do the general work; the divisions were much too large and the men had more work given to them than they could look after with efficiency. The department suffered greatly from the want of Assistant Engineers and that could be remedied by a system of terminal contracts. He had not, however, considered the economic aspect of the question. It would be probably necessary to offer the contract men slightly higher pay than that offered

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to junior members of the Public Works Department and also fairly good terms in the way of a provident fund. It was possible that some who came out on contract would establish themselves in the country as engineers, if they found an opening.

72,080. (Mr. Abdur Rahim.) There was one case of a man who had been thirty years in the service and had only taken three and a half months' privilege leave. He had no figures to show how many men did not take privilege leave or furlough.

72,081. He differed from his colleagues on the subject of training, believing that training in England was of very great use, even for irrigation work. The work he himself had done on railways in England had given him a general idea of how things should be done on irrigation construction when he had to do that work in Burma. For the work of maintenance and running of canals experience in England was practically valueless, but it was of great use for constructional work.

72,082. He had not thought out any programme for study leave. He did not know the rules under which Indian Medical Service officers obtained study leave but believed they were allowed to take a course in a certain branch of work and had to give proof that the time was adequately utilised.

72,083. When a large number of men were required on terminal contracts they would be engaged for the work in hand at the time, and he thought the system would result in economy.

72,084. (Mr. Madge.) A thorough professional training would enable a man to adapt himself to engineering work anywhere. The system of terminal contracts would not be in substitution for the departmental service, but would be auxiliary thereto. There were certain drawbacks in a uniform system; it was necessary to recruit so far ahead that the recruitment was carried on without regard to any programme of work. He did not think in Burma it would be advisable to give out work to contractors instead of having it done by the Public Works Department. It would be better in Burma for the Department to carry out work with petty contractors rather than with one big contractor.

72,085. He did not think men would be willing to have their furlough curtailed if they received six months' privilege leave on full pay, but no doubt officers would agree to take half their furlough on full pay.

72,086. As a rule the imported engineer in Burma was better than the indigenous man. Some temporary engineers had been employed in Burma for a short time but there were only two there now. They were taken on from month to month when there was a rush of work, and then their services were dispensed with.

72,087. (Mr. Fisher.) The present system of recruitment was satisfactory but did not give so good a type of officer as was obtained from Cooper's Hill. An idea of the work done by the Public Works Department in Burma could be obtained from the administrative reports.

72,088. (Mr. Sly.) The Provincial Service officers in Burma came from Rurki, and he knew of no Burman now living who had been appointed from Silpur.

72,089. He doubted whether enough Indians could be obtained to make the system of short term contracts available for recruits in India, but he had not thoroughly considered the matter from this point of view. His recommendation was limited to recruits from England. The term of the contract might be three of five years, dependent on the programme of work. Recruitment for the department would go on as at present, the temporary recruitment being intended merely to relieve pressure. Rather than have a system of probation in this country he would prefer that engineers recruited in England should come out on a contract term and on the expiration of that term a proportion should be appointed permanently to the department; but apart from probation his preference was for the present system supplemented by engineers on temporary contracts for definite work. It would not be advisable to bring out men on ten year con-

tracts and select executive engineers from men whose contracts were just expiring.

72,090. In Rangoon it would be possible to abolish the small contract system for large works and employ large firms but that would not mean a reduction of the staff of the department. There was a large amount of petty work in Rangoon which large contractors would not take up, and the department would have to be maintained even though particular works were given out to contractors.

72,091. The leave rules of the department were exactly the same as those of other services, except with regard to pay. The proposition that furlough should end when an officer reported at the Rangoon Secretariat was made in order to equalise matters. A man who had to take over a charge of an out-of-the-way place was on half pay until he reached his charge, while the man who came to Rangoon went on full pay at once. The same disability existed in other Provinces in India and he suggested that they should adopt the same remedy. The concession was not meant to apply to privilege leave, and was made with the idea of doing away with subsidiary leave.

72,092. (Mr. Chaulbal.) He would rather have the present system of nomination than a system of open competition.

72,093. The observation in the written statement that the time had not arrived for an increase on the 10 per cent. proportion of Indians was the result of experience. As a rule Indians were not a great success in that country. The statement was not based on statistics but on general experience. At present there was only one native of India recruited in Europe in the department. He did not think that the argument put forward by the Provincial service for abolishing the difference in salaries, between the officers of that service and the Imperial service officers on the ground that they were doing identically the same work was analogous to the argument put forward in the written statement to the effect that the duties of first and second grade Chief Engineers were generally identical and there should therefore be only one grade of Rs. 3,000 per month.

72,094. (Sir Theodore Morison.) With regard to reducing the Public Works Department to a small nucleus of supervising officers and giving out the work to engineering firms, it might be that the construction of a long line of Railway would be a suitable work to give to large contractors, but the general work of the department could not be done in that way. Repairs and general work would always have to be done by petty contractors as at present. He doubted whether it would be any cheaper to employ a large contractor on big works, and a large firm would employ petty contractors exactly as the department did at present. It might possibly be that in time large firms would be established in India who would be able to undertake large contracts. In Burma a very large engineering firm was given some extensive work to do but everybody in the department came to the conclusion that the department could have done it quicker and better itself. There were building contractors now established who would be able to take over a large amount of building work, but the Public Works Department would have to prepare specifications, supply clerks of works, and supervise the whole of the work. The measuring up would undoubtedly have to be done by an engineer as it was necessary to employ a sub-divisional officer in that capacity. It was true a very highly trained engineer was not required for measuring work, but it was necessary to have a man with some qualifications and a good deal of honesty.

72,095. (Lord Ronaldshay.) At present in the department there were forty-one executive engineers and forty-two assistant engineers. All divisions had not an assistant engineer in charge of a sub-division. In the irrigation circle a larger proportion of assistant engineers were employed than in other circles. There was a certain number of districts in which the sub-divisions were not held by assistant engineers. The sub-divisional charges not only absorbed the whole of the assistant engineers but a large part of the upper subordinate service and part of the lower subordinate service. At times temporary engineers had been placed in sub-divisional charges and there were a few

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in such charges now. It was not an ideal state of affairs to have a subordinate officer in sub-divisional charges, but it was the best that could be done at present. It would be a great improvement on the

present system to employ a large number of assistant engineers on terminal contracts for the purpose of placing them in sub-divisions; but it would probably be too expensive.

(The witness withdrew.)

J. CRAIG, Esq., Executive Engineer, Burma.

Written Statement* relating to the Public Works Department, being the corporate opinion of Officers of the Provincial Engineer Service, Burma.

72,096. (1.) The question of the recruitment of the Engineer Establishment of the Public Works Department is one that has given rise to widespread and lasting discontent. It is generally felt throughout the country that the policy of extending the alumni of the Indian Engineering Colleges from the Imperial Service (in which they were formerly included) is unjust and should be abandoned.

(2.) The following points which deal with this question deserve consideration, for they reveal that the situation has not in fact been adequately appreciated.

ORIGIN OF THE PROVINCIAL ENGINEER SERVICE.

(3.) Prior to the institution of the Provincial Engineer Service by the Government of India, Resolution No. 2112 G., dated the 19th July, 1892, recruits from the Indian Engineering Colleges (one of which, viz., that at Rurki, was established so long ago as 1847) were appointed to the Imperial Service, i.e., on an equal footing with Engineers obtained from England. It has been repeatedly proclaimed (vide the Government of India, Resolution No. 2112 G., mentioned above, and No. 675-694 E., dated the 24th April, 1908, &c.) that the Provincial Engineer Service was the outcome of the recommendations of the Public Service Commission of 1886-87. The issues which naturally present themselves are—

(i) Were these recommendations sound in themselves?

(ii) Was it justifiable to give effect to them?

(iii) Has the policy advocated by the Commission been consistently followed?

The following considerations show that the answer to each of these questions is in the negative and that therefore the institution and retention of the Provincial Engineer Service stands self-condemned.

PUBLIC SERVICE COMMISSION OF 1886-87.

(4.) The report of that body states that its recommendations were based on two grounds, viz.:—

(i) That the considerations which led it to recommend the formation of Imperial and Provincial Services, in respect to the various branches of the Civil Service, with distinct conditions of service, applied with equal force to the Engineer Establishment of the Public Works Department, and

(ii) That Engineers recruited from England received a better professional training than that which the Indian Colleges were capable of affording.

(5.) Ground No. (i).—Here the Commission were distinctly in error because there was absolutely no analogy (and this fact has been admitted) between the case of the various branches of the Civil Service and that of the Engineer Establishment of the Public Works Department.

The following statement contrasts the facts of the case of the various former branches of the Civil Service recruited in India with those of the case of Indian trained Engineers:—

Case of the various branches of the Civil Service.

(i) There had always been a complete distinction between the various branches of the Civil Service recruited in England and India.

Case of Indian trained Engineers.

This was not the case with the Engineer Establishment of the Public Works Department. Engineers recruited in England and India were on precisely the same footing.

* The statement was signed by Messrs. W. R. Wells and J. Craig, Executive Engineers, and Mr. A. H. Ricketts, Assistant Engineer.

(ii) The branches of the Civil Service recruited in India (now included in the Provincial Service) were formerly subordinate services and were not recruited for and required to do the same work and bear the same responsibilities as Officers of the Imperial Civil Service obtained from England. The same remarks apply to most other Provincial Services, e.g., the Survey, Forests, &c.

(iii) The Commission recognized that the Branches of the Civil Service recruited in India were recruited in an irregular manner which was not conducive to efficiency. The Provincial Service was designed to regularize recruitment and did in fact considerably raise the status and improve the prospects of these services.

Engineers recruited in India belonged to a superior service. They were and are still recruited for and required to do the same work and bear the same responsibilities as their English contemporaries.

Indian trained Engineers were recruited from specially established institutions of long standing, one of which had been in existence for forty years. Many of them had attained high administrative appointments.

The Provincial Service was in the case of these Indian Engineering Colleges a retrograde measure and greatly lowered the status and prospects offered to their successful students.

Furthermore it was virtually admitted by the Government when actually giving effect to the Commission's recommendations that there was no analogy between the case of Indian trained Engineers and those other services recruited in India; for the Provincial Engineer Service, as instituted, was quite dissimilar to other Provincial Services. In short, except as regards pay, leave, and pension, there was in all other respects no distinction between Engineers recruited in England and India respectively (vide Resolution No. 2112 G., dated the 19th July, 1892).

(6.) Ground No. (ii).—This conclusion obviously could only have been arrived at from the evidence before the Commission which, be it mentioned, was not tested by cross-examination of the witnesses produced.

A close scrutiny of the evidence will reveal—

(i) That it did not establish the inferiority of Indian trained Engineers, for many witnesses, including officers with the widest experience, were of opinion that there was little to choose between the best Rurki Engineer and his English rival, and

(ii) That much of it was prejudiced for, speaking generally, the excellent records established by many Indian trained Engineers in the past were forgotten, the fact that natives of India had only recently begun to appreciate and practise engineering as a profession was not considered, and the fact that many Indian College Engineers were at that time holding high administrative appointments secured by competition with their English contemporaries was completely ignored.

(7.) Even admitting for the moment, that the evidence tended to prove that the Indian Engineering Institutions (which had done well enough in the past) had fallen short of the requirements of the day, the proper remedy lay in raising the standard of professional education imparted in them and not, as advocated, in making a differentiation between recruits from them and Engineers obtained from England.

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(8.) Again it is a very significant fact that the Commission did not advocate the creation of any such distinction in the cases of the remaining superior services (e.g., the Accounts, Traffic, Finance, &c.), which were also partially recruited in India, but in which recruitment was by nomination and not by competition open to all.

(9.) It is contended, therefore, that the Commission failed to appreciate the true position in connection with the Engineer Establishment of the Public Works Department recruited in India, and that their recommendations which suggested as an awkward and glaringly unjust method of remedying an alleged evil (*viz.*, the inferiority of Indian trained Engineers) were wholly unsound.

(10.) To pass on the second issue, *viz.*, whether it was justifiable to give effect to the Commission's recommendations. The answer is most emphatically in the negative for two reasons.

(11.) Reason (i)—*The Government of India Act of 1833 and the Queen's Proclamation of 1858.*—By Clause 87 of the said Act it is provided that "no person by reason of his birth, creed or colour shall be disqualified from holding any office in our service." In the despatch of the Board of Directors of the Honourable East India Company which accompanied the Act, it was stated:—"It is fitting that this important enactment should be understood in order that its full spirit and intention may be transfused through our whole system of administration. You will observe that its object is not to ascertain qualification but to remove disqualification. . . . Fitness is henceforth to be the criterion of eligibility." Again the Queen's Proclamation, which is widely known and which it is therefore unnecessary to quote, was couched in very similar terms.

The above statute and proclamation have been widely regarded as a charter removing all bars to any branch of the public service and holding out the promise of increased and higher employments of Natives of India (which term includes statutory natives) and the complaint that this promise has not been fulfilled has been widespread and uninterrupted.

When the case of the Indian Engineering Colleges is examined, however, the position becomes worse, because here, by the creation of the Provincial Engineer Service, the public in India entering these institutions were in fact dispossessed of that which they had had for nearly half a century.

Whatever may be the construction put on the said Act of 1833, and the Royal Proclamation as to the grant of facilities for admission to the Public Service not already enjoyed, it is contended that these pronouncements at any rate barred the institution of the Provincial Engineer Service and the withdrawal from the alumni of Indian Colleges of that which they had possessed for a long period of time, *viz.*, full equality with their contemporaries from England. The introduction of the Provincial Engineer Service reversed the practice of years, thereby disturbing vested rights which had accrued to the public in India, and suddenly established a system by which the place of recruitment alone is the criterion of eligibility for the Imperial Branch of the Public Works Department.

It may be argued that the Indian Engineering Colleges were disqualified from receiving appointments in the Imperial Service by reason of the finding of the Public Service Commission that recruits trained in them were inferior to Engineers obtained from England. In reply it is contended that—

(a) the findings of the Commission, as argued in sub-paragraph 6 above, cannot be upheld;

(b) the Government of India have virtually acknowledged that Indian trained Engineers are qualified for the Imperial Service (*vide* the arguments connected with the case of Temporary Engineers, paragraph 13 below). If outclassed people from Rurki College, who in addition were only eligible for the Provincial Service are held to be fitted for the Imperial Service, the pick of the Indian Colleges cannot be defeated;

(c) even admitting its existence, this disqualification based upon the findings of the Public Service Commission was capable of being removed and should have been immediately removed; and

(d) in any case it has since been removed, *vide* the public admissions of eminent persons quoted in sub-paragraph 23 (b) below. The Indian Engineering Institutions should therefore be restored to the position they occupied before.

(12.) Reason (ii)—*Pledge given to Indian Colleges in 1873.*—Again the institution of the Provincial Service for Indian College Engineers was in direct opposition to a definite pledge given to them in a speech delivered by Sir William Muir, Lieutenant-Governor of North-Western Provinces at Rurki on the 23rd November 1873, of which the following is an extract:—" . . . But apart from personal associations, there is a reason which renders the present moment one of public interest; the establishment in England of an Engineering College for India has unsettled the minds of the public here as to the prospects of this institution and the continuance to it of the patronage of Government. It has been a subject of much anxiety to myself and of correspondence with the Government of India. It is, therefore, with sincere satisfaction that I am able to announce to you and through you to those without who are interested in the Thomason College, that the Institution at Cooper's Hill will in no degree affect the relations of the Government of India with this College, nor the employment which has been hitherto guaranteed to its more successful students. Between the two seminaries there will be no opposition or antagonism. The requirements of this great country are ample for both. I am sure that you will all, with me, be thankful to the Governor-General in Council for the justice which has thus been rendered to Rurki College."

The pledge was given shortly after the institution of Cooper's Hill College at a time when the public in India were naturally apprehensive that the position of the alumni of the Indian Engineering Colleges in the Public Works Department would be injuriously affected, and it will be observed that it was given with the full authority of the Government of India and possibly also of the Secretary of State.

It will further be noticed that the Government pledged that the Institution of Cooper's Hill would in no degree affect its relations with Rurki College, nor the appointments "hitherto guaranteed" to its successful students. The appointments "hitherto guaranteed" were in the Imperial Service. Yet notwithstanding this pledge the Provincial Engineer Service making a great distinction between Engineers recruited in England and India was introduced twenty years later and was based to a great extent on a comparison of the respective merits of Cooper's Hill and Indian trained Engineers.

Again, it must be noted that this pledge, which is recorded in the Rurki College Calendar of 1872-73, formed one of the strongest inducements to candidates to enter Rurki College, for these men naturally believed (and it was a legitimate belief for them to nourish), that the distinction created was merely a tentative measure, and that when the organization of the Engineer Establishment came to be reconsidered, in accordance with paragraph 10 of the Resolution No. 2523-G. of 1893, the said distinction would be abolished.

(13.) *Case of certain Temporary Engineers.*—It now remains to examine whether the recommendations of the Commission have been consistently followed, and whether the subsequent actions of the Government indicate an unqualified approval and acceptance of those recommendations. Here again the answer is emphatically in the negative. The arguments in this connection refer to the case of twelve Temporary Engineers, all Rurki men, who, many years after the Provincial Engineer Service had been established by the Resolution No. 2112-G. of 1892, were made permanent and placed, not in the Provincial, but in the Imperial Service.

The question is why?

The deep significance of this will be more readily and forcibly recognised when the following facts are digested:—

(i) These officers had, with one single exception, passed out of Rurki College after the Commission had discovered that this Institution did not afford a training equal to that obtained in England.

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(ii) They had failed to secure guaranteed appointments when competing for them and had consequently no claim (except good service rendered, which applies equally to other Indian trained Engineers) to this special treatment.

(iii) The majority of them had failed to secure the necessary percentage of marks (*viz.*, 66 per cent.) required in order to qualify for Government appointments and were therefore not eligible under the rules of the Institution which trained them, for permanent appointments at all. That is to say they could not, with the percentage of marks obtained by them, have obtained guaranteed appointments even if they had in fact headed the examination lists in their respective years.

(iv) Three of these Officers, *viz.*, Messrs. W. C. Cooper, C. H. A. Muller and E. S. Christie, were specially barred from being appointed to the Imperial Service, under paragraph 11 of the Resolution No. 2112-G. of 1892, because they were actually undergoing training at Rurki College on the date of the said Resolution and failed to secure the guaranteed appointments allotted by Resolution No. 1443-G. of 1884. In their case therefore the Provincial Engineer Service took effect from the 19th July, 1892. That is to say, even ignoring the disqualification stated in (ii) above, they were only eligible for the Provincial Service.

(v) In one case (the name can be stated if required) the Officer failed to qualify absolutely in Rurki College and took up an appointment in the service of the State as a Temporary Sub-Overseer in the Rajputana-Malwa Railway. He was subsequently engaged in a subordinate capacity as Temporary Sub-Engineer in the Punjab and later appointed as a Temporary Engineer, from whence he was translated to the Imperial Engineer Service. This is therefore a case where an unqualified person has risen from the lowest rung of the ladder to Imperial Service, long after the Provincial Engineer Service was established, and this should be contrasted with the treatment accorded to the pick of the Indian Colleges against whom the door to similar advancement is absolutely banged and barred.

(14.) It is irresistibly clear that—

(i) the placing of these Officers in the Imperial Service was a distinct departure from the policy advocated by the Public Service Commission and in fact amounts to a reversal of that policy.

(ii) It stands revealed that the Government have virtually admitted, that Engineers trained in India even subsequent to the Commission's findings, are not necessarily inferior to men recruited in England, and that they are fully qualified to be placed on an equality with the latter, *i.e.*, in the Imperial Service. If this applies to men who are out-classed in Rurki College it must likewise apply with greater force to others who, as stated above, are the pick of the Indian College, but who are placed in the Provincial Service.

(iii) The action taken in respect to the three Officers mentioned above whose appointment to the Imperial Service was barred by virtue of Resolution No. 2112-G. of 1892 must be held to have been due to an authorised relaxation of the rules laid down in the said Resolution and constitutes in fact an amendment of the said rules and renders other Indian trained Engineers also eligible for the Imperial Service, and it is further contended that justice and equity demand that these latter should be similarly treated.

(15.) *Other Superior Services, e.g., the Accounts, Finance, Traffic and Police (until recently).*—

The facts in connection with these Services are specially worthy of attention for they serve both to emphasise the injustice of the Provincial Service and dispel the erroneous belief "that it is the general rule that members of the Public Service recruited in India are on a different footing as regards pay, leave and pension rules to Officers obtained from England."

This, be it noted, was the reason given by the Secretary of State for not re-opening the Imperial Service to Indian trained Engineers in the House of Commons in reply to a question asked by Mr. T. Hart Davies in May 1908, enquiring whether the subject of

re-opening the Imperial Service to Indian College Engineers would be considered.

The service are, like the Public Works Department, partially recruited in India, but such Indian recruits are on a full equality with their English contemporaries and secure vastly better terms of service than those granted to the Alumni of the Indian Engineering Institutions.

The questions which immediately present themselves are—

(a) why were not Provincial Branches introduced for these services also? and

(b) why was the Indian recruited element of the Public Works Department alone singled out for degradation?

It is a fact that of all the Branches of the Public Service in which the Indian recruited and imported elements were on an equal footing, the Public Works Department only was disturbed and split up into Imperial and Provincial services.

It is contended that the introduction of this invidious and unjust distinction between British subjects born, domiciled, educated and recruited in India is indefensible. Further, in view of the fact that Indian trained Engineers win their appointments by free and open competition and not by nomination (which is frequently secured by influence) and that they can claim to possess superior educational qualifications to those required of men entering these other services, this state of affairs is significant and startling. For example, the educational test required for admission into the Accounts and Traffic Departments is on a par with that required merely to enter the Indian Engineering Colleges, while the Engineer has a further superior, general and professional educational course of three to four years in College itself, and also a further professional training of one year after completing his College course.

It is manifest therefore—

(a) that the above facts reveal that it is not the general rule that members of the public services recruited in India are on a different footing to officers of their services obtained from England, but

(b) that on the contrary, where officers recruited in both countries are recruited for and required to do the same work and have the same responsibilities, as in the case of the above-mentioned services, it is the general rule that they are on the same footing;

(c) that of all the branches of the public service in which Indian trained and English recruits were formerly on the same footing, the position of the Alumni of the Indian Engineering Colleges has alone been disturbed.

It is therefore contended that—

(i) the ground, stated in reply to the question asked in the House of Commons, for not re-opening the Imperial Service to Indian College Engineers disappears; and

(ii) that they should in consequence be restored to their former position.

POSITION OF INDIAN COLLEGE ENGINEERS CONTRASTED WITH THAT OF ENGINEERS FROM ENGLAND.

1.—Position prior to 1908.

(16.) The above arguments deal with the policy involved in the creation of the Provincial Engineer Service. It now remains to examine the conditions imposed upon the public seeking admission to the public service through the Indian Engineering Colleges and to contrast them with those offered to Engineers obtained from England.

Although both these classes were and are still recruited for and required to do the same work and bear the same responsibilities, the position occupied by the Alumni of Indian Colleges prior to 1908, was as follows:—

(i) The Indian College Engineer received in thirty years Rs. 1,16,530 (amounting at 4 per cent. compound interest to Rs. 1,76,800) less pay than his Imperial contemporary.

(ii) The pay of the Provincial Executive Engineer, 3rd Grade, in charge of a division, was actually much less than that granted to an Imperial Assistant Engineer, 1st Grade, in charge of a subdivision involving inferior work and far less responsibility. As

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a result, instances frequently occurred in which Provincial Engineers received less pay than their own subordinates.

(iii) The position of Provincial Engineers on their attaining the administrative rank of Superintending Engineer was still more glaring. Promotions to these appointments are, under rule, made by special selection only, so that a Provincial Engineer so promoted would necessarily be selected in preference to other Executive Engineers whether Imperial or Provincial. Under the scale of pay fixed, a Provincial Engineer on receiving such promotion would not only have received approximately Rs. 67,000 less pay during his former service than other Imperial Officers, who by the very fact of his selection were confessedly inferior to him, but he would even then *qua* Superintending Engineer receive just half the pay of an Imperial Officer holding the same appointment and also less than Imperial Officers whom he had superseded and who would be his immediate subordinates.

(iv) In the matter of special allowances, which are given solely on account of extra expense involved in living in some localities, Provincial Engineers were and are still granted only two-thirds of the sum allowed to Imperial Officers.

In certain cases, moreover (*vide* Appendix 19, Public Works Code), the allowances granted to Provincial Officers from Superintending Engineer downwards are less than those granted to Sub-engineers (subordinates). These glaring and unjust anomalies speak for themselves. They handicapped the Indian College recruit in every possible way.

(17) A general memorial, setting forth these grievances and praying for the restoration of the Alumni of Indian Engineering Colleges to the Imperial Service, was accordingly submitted to the Viceroy in 1902, that is, when the Provincial Service had been in force seven years and when the consideration of the organisation of the Engineer Establishment of the Public Works Department was due, in accordance with paragraph 10 of the Resolution No. 2523-G., dated the 25th September 1893. The reply given was a direct refusal on the ground that the memorialists accepted employment well knowing "the terms of the service." This reply may here be suitably contrasted with the attitude displayed towards the imported elements of the Public Works Department, who have met with no resistance in their demands to secure accelerated promotion and increased rate of pay which, be it known, is very greatly in excess of that which they contracted to receive, and who are at the present moment clamouring for largely improved pensions to which they are distinctly not entitled under "the terms of their service."

(18) The matter has then appealed to the Secretary of State by means of a general memorial submitted in December 1906.

II.—Changes of 1908.

(19) The next thing that transpired was the memorable reorganisation scheme of 1908 (*vide* Resolution No. 675-694-E., dated 24th April 1908), which made the position of the Alumni of the Indian Colleges worse. Indian College Engineers were also then informed that the orders of the Secretary of State on their memorial of 1906 were embodied in the said reorganisation scheme.

It would be no exaggeration to say that the feeling raised by this retrograde measure was one of utter consternation and despair, which deepened into bitter and intense resentment on the issue, shortly after, of the Government of India's letter No. 997-E., dated 6th June 1908, laying down the treatment to be accorded to Indian College Engineers, who declined to accept the new conditions of service.

Briefly, the changes introduced in 1908 were:—

(i) Provincial Engineers were removed from the same list as Imperial Officers, thus making a complete differentiation between the two classes.

(ii) The promotion of Imperial Officers was accelerated, while that of Provincial Engineers was retarded by several years, thus creating the position by which Indian College men would, through no fault of their own, and wholly irrespective of the true relative merit, be compelled to serve under Imperial men who were their juniors and who may have been previously their own subordinates.

(iii) Promotion to the administrative grade, i.e., to Superintending Engineers and upwards, was made almost physically impossible for Indian College Engineers.

(iv) The whole reorganisation was transparently designed to subordinate the Indian recruited element of the Public Works Department to the element obtained from England, and to place the former in exactly the same relation to the latter as members of other Provincial services bear to the Imperial Officers of their services.

(v) As compensation for these changes which shattered their position and prospects and ensured the complete domination of the imported staff in the Public Works Department, a slight increase of pay was offered to Indian College Engineers. This increase when contrasted with the substantial increase granted to Imperial Officers is striking.

For example (i) in the first eight years of service the increase granted to Provincial Engineers averaged Rs. 3 per mensem, while that of Imperial Officers averaged Rs. 88 per mensem.

(ii) In the first fifteen years of service the average increase for Provincial Engineers was Rs. 29 per mensem, while that of Imperial Engineers averaged Rs. 142 per mensem.

And notwithstanding the fact (the point requires and will bear repetition) that both classes of Officers are recruited for and required to do the same work and bear the same responsibilities.

(20) It is small wonder that this reorganisation scheme was rejected by the vast majority of Indian College Engineers, but they were destined to receive an even greater and more staggering blow, for it was ruled (*vide* the Government of India's letter No. 997-E., dated the 6th June 1908, cited above) that—

(i) these officers would receive no increase of pay;

(ii) they would continue to be promoted according to the rules previously in force for Imperial and Provincial men alike and which had been abolished for the Imperial Service; and

(iii) their names would also be removed from the same list as their Imperial contemporaries.

These orders were not only unjust in that they withheld an increase of pay which had, only one month previously (*vide* preamble to Resolution No. 675-694-E., dated 24th April 1908), been publicly admitted to be necessary for the Engineer Establishment of the Public Works Department, but they were also in direct opposition to and constituted a withdrawal of the primary conditions under which these Officers were induced to accept employment, *vide* Resolution No. 2112-G. and No. 2523-G., dated the 19th July and 25th September 1893, respectively.

Under these said Resolutions Provincial Engineers entered the service on the express conditions:—

(i) that except as regards amount of pay, leave and pension there would in all other respects be no distinction between them and Imperial Officers; and

(ii) that they were to be borne on the same list and promoted side by side with Imperial Engineers.

It is submitted that this disregard of the paramount and indefeasible rights of these Officers and this arbitrary imposition of changed conditions which would not have been accepted in the first instance (*i.e.*, when they entered the service) is unparalleled, and constitutes a significant departure from the practice hitherto observed by which the inducements offered to men entering the public service have been regarded as permanent and enduring.

III.—Changes of 1912.

(21) The general and sustained agitation produced by the above treatment is well known. After prolonged reconsideration the Government of India were led to the conclusion that the position taken up in 1908 was untenable, and the reorganisation scheme of that year has in consequence been recently reversed, *vide* Resolution No. 439-458-E., dated the 15th May 1912.

The position now is exactly as it was previous to 1908 with similar anomalies and defects, viz.,—

(i) the minimum pay of Provincial Engineers is much less than the maximum pay of Imperial Assistant Engineers;

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(ii) The minimum pay of Provincial Superintending Engineers is less than the maximum pay of Imperial Executive Engineers;

(iii) the same anomalies in connection with local allowance still exist; and

(iv) generally the pay granted to the provincial element is inadequate and is not commensurate with their work and responsibilities.

The redress granted, however, is accepted as partial and tentative as it has been admitted in replies to questions asked in the House of Commons that the case has not been finally settled and that the question of the restoration of the Alumni of the Indian Engineering Colleges to the Imperial Service has been deferred for consideration by the Royal Commission.

RECAPITULATION.

(22) Various reasons have been advanced above, which it is contended, establish—

(1) that the policy advocated by the Public Service Commission of creating a Provincial Engineer Service for Indian recruits was unsound;

(2) that its adoption was barred by the Government of India Act of 1833 and the Royal Proclamation of 1858, for it in fact, dispossessed the Public in India of facilities for admission to the higher ranks of the public service on a complete equality with Officers obtained from England which they had enjoyed for nearly half a century. It must also be remembered that these Engineering Colleges formed the only source in India of recruitment to the public service on an equality with Officers from England, by free competition open to all.

(3) that the inclusion of the Alumni of the Indian Engineering Colleges in the Provincial Engineer Service constituted the breach of a definite pledge and has moreover resulted in the creation of an invidious and unjustifiable distinction between British subjects domiciled, educated and recruited in India as explained in sub-paragraph 15 above;

(4) that the Government themselves have repeatedly broken away from the policy advocated by the Commission as in the cases of the various temporary Engineers (*vide* sub-paragraphs 13 and 14 above);

(5) that the line of action taken in the cases of these Temporary Engineers gives other Indian College Engineers a just and an irrefragable claim to like treatment;

(6) that the whole history of the Provincial Engineer Service from its very institution reveals a course of long continued injustice and shows how very little consideration has in fact been bestowed upon it; and

(7) that the only solution of the matter lies in the discontinuance of the present policy and the restoration of the Alumni of the Indian Engineering Colleges to the position they formerly occupied, that is to the Imperial Service.

CONCLUSION.

(23) Finally it is urged that the policy now in vogue should be abandoned and that Indian trained Engineers should be restored to the Imperial Service on the following additional grounds:—

(a) Indian College Engineers have established brilliant records in the past and have in numerous instances held, and are still holding, the highest administrative appointments in the Indian Public Works Department with distinction. These facts have been duly admitted by no less a distinguished Indian authority than Lord Macdonnell who, in an address delivered at Rurki College on the 6th November 1900, alluded in the highest terms to the instances in which the Alumni of this Institution had established not merely Indian but European reputations. Lord Macdonnell specially instanced the names of Sir W. Wilcocks and Sir W. Garstin of Egyptian fame, who received their training at Rurki College;

(b) Whatever may have been the condition of the Indian Engineering Colleges at the time the Public Service Commission sat (and this as argued above did not justify the withdrawal from the public in India of that which they had possessed for so long a period

of time) the standard of education imparted in these institutions has since been considerably raised. Rurki College is now admitted to be equal to any similar institution in Europe. The following is the testimony of persons whose opinions must prevail:—

(i) Lord Macdonnell in his address referred to above spoke of Rurki College in the following terms:—"This College is, I am assured by those competent to speak on the point now in a position to impart instruction both theoretical and practical, up to the standard of any similar institution in Europe."

(ii) Sir J. P. Hewett, Lieutenant-Governor of the United Provinces, in a speech delivered at Rurki College on the 27th October 1909, spoke of this institution and its Alumni in the following terms:—"Your assurance, Major Atkinson that it is the aim of yourself and your colleagues to keep the education given in Thomason College abreast of the best technical education available in the Western World is amply vindicated by the extremely high standard of education to which the students who are trained here attain. I have had the privilege of working in close conjunction with two of the most distinguished Alumni of the College, I refer to Mr. Goument, now Chief Engineer in the Buildings and Roads Branch of these Provinces and to Mr. Harriot, at present Superintending Engineer in the Central Provinces, but destined to reach a still more distinguished position in the Public Works Department. I have no hesitation in saying that these officers are excelled by none of their brethren in the department for professional skill, for initiative, or for a correct appreciation of the needs of the country. I have had opportunities of observing the same good qualities developing themselves in some of the younger men educated at this College, and I have no doubt that you and your staff will continue, in the future as in the past, to turn out a constant stream of trustworthy Engineers. Your College has recently been described by the Secretary of State as an institution with a large and illustrious history behind it and you rightly observe that, if it is to maintain its past pre-eminence, it must keep abreast of the times and that therefore must be a continuous advance and constant and expensive improvement." The deep significance of this second utterance, by a Lieutenant-Governor in India, will be forcibly realized when it is remembered that it was uttered when the agitation against the changes of 1908, was at its highest and after Indian College Engineers had utilized the previous utterance of Lord Macdonnell and had held it out to the Secretary of State as conclusive proof that Indian trained recruits were not inferior to their English contemporaries. It is irresistibly clear that Sir John Hewett would not have spoken in these unambiguous terms, thereby presenting the Alumni of the Indian Colleges with another lever upon which to work, had he not been inwardly conscious that Rurki College did in fact turn out men of marked ability.

(iii) There is yet another public admission establishing the fact that Rurki College has nothing to fear from a comparison with any similar institution in Great Britain. The Honourable Mr. Goument, Secretary to the Government of the United Provinces, in a speech at Rurki College on the 14th July 1910, stated—"I think it may safely be said that this College is now in a position to impart an education, both theoretical and practical, up to a standard which compares very favourably with that of similar institutions in Europe. The following extract from a note recently recorded by an expert in your Visitors' Book bears out this statement. 'I have visited nearly every College of importance in India, but among all of them Rurki College alone appears to me to attain to the standard of a first grade Engineering College, the organisation and equipment are admirable and the arrangements for imparting practical training in Mechanical and Civil Engineering are hardly equalled in any institution in Great Britain.'

(c) it is claimed, therefore, and it is impossible to resist this claim that there is no difference between the professional education imparted at this institution and that received by the average Engineer recruited in England. On the contrary, it is a fact

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in some cases that qualifications of Indian College Engineers are superior to those possessed by the latter, e.g., where men who have only passed out of the Upper Subordinate Class at Rurki have proceeded to England and after undergoing a very meagre training for a short period in the elements of Engineering (at the Crystal Palace, for instance) have been appointed by the Secretary of State to the Imperial Service. These cases are well known both to the Government of India and to the Secretary of State;

(d) the Indian College Engineer also possesses the great and recognised advantage (on which great stress was laid when the institution of a Military Staff College in India was advocated) of having received his training in the country in which he has to practise his profession;

(e) that the Public Works Department is purely a professional and scientific service and has no share in the political administration of the country and that

Mr. J. CRAIG called and examined.

72,097. (Chairman.) The witness held the position of Executive Engineer and had been in the service for fourteen years. The bulk of the Provincial Service in Burma consisted of men promoted from the Subordinate Service, only about seven men having been recruited direct. The written statement represented the views of all the members of the Provincial Service.

72,098. The division into Imperial and Provincial branches was inherently unsound as the work done by both was precisely the same. In Burma the Provincial Engineer was given a charge of equal responsibility to that occupied by Imperial officers. For the present it was necessary to have a proportion of European officers in the Service, but he believed ultimately the service could be exclusively recruited from India. He did not think that officers coming from England had any special expenses beyond those incurred by officers recruited in India, as all officers had to keep up the same status. There might, however, be a certain difference in regard to the expenses attaching to the family of a European recruited officer. He would not agree that men recruited from Europe should receive anything in the nature of a foreign service allowance, as that would cause discontent among the men recruited in India.

72,099. For the superior service he would recruit half in England and half in India, and for India open competition between men drawn from the Indian colleges would be the best. He thought Rurki college was as efficient as any college in England but that view was not based on experience of English colleges as he had not visited any English colleges, but it was based on his experience of men recruited from some of those colleges who had served under him.

72,100. There should be a two years' probation both for those recruited in India and those recruited in England.

72,101. He had been present at the examination of the previous witness (Mr. Lewis) but did not agree with Mr. Lewis' scheme for bringing men out on a five years' contract; he did not believe men would come from England on such conditions. It was much more likely that they would come out on a two years' probation than under a five years' contract.

72,102. The creation of a family pension fund was very much desired by the service.

72,103. (Lord Ronaldshay.) The Provincial Service engineer was disqualified from holding any Imperial appointment in the Public Works Department. It was true that he was not disqualified from holding

(The witness withdrew.)

R. C. EDGE, Esq., Superintending Engineer, Bihar and Orissa.

Written Statement relating to the Public Works Department.

72,109. (I.) Method of Recruitment.—Since the abolition of the Royal Indian Engineering College, Cooper's Hill, the Imperial Service has been recruited by Engineers selected by a Committee in England.

therefore the restoration of the alumni of the Indian Colleges to their former position, while gratifying the legitimate claims and aspirations of the domiciled European and Indian communities, without impairing efficiency (for the already high standard of the Indian Colleges could, if necessary, be raised still further) and giving a much needed impetus to higher technical education to which so much attention is being rightly devoted, would in no degree imperil British supremacy; and

(f) lastly the present policy is one which needlessly and unjustly enforces a distinction between two classes which is strongly and increasingly resented, and is in fact opposed to the highest principles of liberal statesmanship which to use the words of the present Prime Minister in his memorable speech at Birmingham in September 1909 aims at "Removing the domination of unjust monopoly and opening everywhere the gate to intelligence, to merit, and to energy."

"any office," but he did not receive the same emoluments as the Imperial officer, and he took "any office" to mean any office without any distinction.

72,104. (Mr. Chaulgal.) No one in the Provincial Service had yet become qualified for the post of Superintending Engineer or Chief Engineer.

72,105. (Mr. Sly.) With regard to the complaint that certain temporary engineers, whose college careers were not equal to those of men in the Provincial Service, were promoted to the Imperial Service, it was probably the case that the temporary engineers had had a long period of practical work in the department and that it was owing to their proved capacity that they were promoted. They were however promoted after the Provincial Service was formed, and if they were fit for the Imperial Service, Provincial officers should also have been promoted. It was really a reversal of policy because in any system of examination the top man was always selected. He did not mean to suggest, however, that promotion throughout a man's career should be regulated by his position at college or in the examination list.

72,106. (Mr. Madge.) Some of the men who had entered the subordinate service on account of there being no opening in the Provincial Service had worked very efficiently. The training in India was as good as that in England, and in some respects better, and his opinion upon that point was based on the experience he had had of the work of both classes of men. The Indian engineer was much better acquainted with India than the man who came from England and also was in a better position to deal with subordinates and workmen.

72,107. (Sir Murray Hamrick.) The statement that temporary engineers had been appointed to the permanent service instead of Provincial Service men referred to India and had nothing to do with Burma.

72,108. He did not approve of promotions from the Subordinate Service to the Provincial Service. The subordinates should have their own graded service and should not look for promotion outside that service. Some men promoted from the subordinate service had made good Provincial officers. He urged that the Provincial Service should be abolished for Indian college engineers and that a Provincial Service should be established which would be entirely manned by men promoted from subordinate grades. The men taken from Rurki and the other engineering colleges should be taken straight into the upper service. He did not so much object to the promotion of men from the subordinate service under present conditions as to the whole system.

There is no examination, but certain qualifications are required equal to those required for passing the examination for the associateship of the institution of Civil Engineers.

In the absence of a special College for training Engineers for India, this system is probably the most

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satisfactory. Members of the service, however, consider that it is desirable that senior officers of the Public Works Department or railways should be more largely represented on the Selection Committee.

72,110. (II.) Training and Probation.—Recruits are selected from various Colleges and Institutions in the British Isles. On the whole this training is satisfactory, though it has no special reference to Indian conditions, as was the case with the course at the now defunct Royal Indian Engineering College. At present many of the men, who come out to India, have had little or no practical training in England. It would be an advantage to insist on a year's training on works at home before appointment to the Public Works Department.

There is no probationary period in India at present, and although it would have some advantages, it is not altogether desirable if proper care is taken in the selection of suitable recruits in the first instance.

72,111. (III.) Conditions of Service.—The number of officers employed should be such that it is always possible for an officer to obtain leave which is due to him. At present it very frequently happens that an officer is refused leave on the ground that there is no one to relieve him, although the number on leave at the moment is less than the proportion—supposed to be allowed for in fixing the cadre. The number of officers required will naturally vary from time to time, and the cadre should therefore be revised more frequently than at present.

Any Royal Engineer officers who may be drafted into the Department should be so placed in the list that they do not become senior in position to men who are senior to them in age.

72,112. (IV.) Conditions of Salary.—The pay of the Imperial Engineers was reorganised in 1908 and placed on an incremental basis. This gave improved pay to many, but at the same time exchange compensation, which was formerly drawn by officers domiciled in Europe, was withdrawn. This reduced the advantage in pay considerably, inasmuch that it was found necessary in some cases to restore the exchange compensation in order to prevent officers from actually losing by the change. Moreover, the pay of the administrative grades was not altered, though the exchange compensation was withdrawn, with the result that all Superintending Engineers who have been promoted to that rank in the last few years are actually drawing less pay than they would if no change had been made in 1908. On the whole, therefore, it cannot be said that the present rates of pay are altogether satisfactory, having in view the rapidly increasing cost of living. It is fairly certain that very few officers are in a position to save anything from their pay to supplement their meagre pension on retirement.

Promotion to the administrative ranks is not a satisfactory footing. At present all Superintending Engineers in a province are on a provincial list, and promotions to the different classes are made on that list. This is very hard when there are two or more men of about the same seniority in one province, as the number of men in each class is fixed in a certain proportion, and some cannot therefore hope to rise to the 1st class through no fault of their own, though men junior to them are able to do so owing to more favourable circumstances in other provinces.

It has been suggested that this could be remedied by having only one class of Superintending Engineers starting on a salary of Rs. 1,500 (the pay of the present 3rd class), and rising by annual increments of Rs. 100 to Rs. 2,000 (the pay of the present 1st class).

Considerable hardship and pecuniary loss is often caused by the transfer of officers in the administrative grades from one province to another. It is very hard for a man who expects promotion to these grades in the province in which he has served all his service, to have another from outside brought in over his head, to block his promotion for the greater part of the remainder of his service. It should be made a rule that unless in very exceptional circumstances no transfer should be made between provinces unless it can be shown clearly that there is a serious block of promotions in one, or a great want of officers in the other.

72,113. (V.) Conditions of Leave.—The rules governing the grant of furlough are practically the

same as those which apply to the Indian Civil Service, except in the most important particulars of leave allowance. In the case of the officers of the Indian Civil Service and Military officers under Civil leave rules, furlough allowances are subject, if paid at the Home Treasury, to a minimum limit of £500 per annum, or the salary last drawn, whichever is less, and to a maximum limit of £1,000 per annum. In the case of Civil Engineer officers of the Public Works Department, there is a minimum limit, and the maximum has been fixed at £800 per annum. This inequality may be realised by taking the case of a Royal Engineer officer in Public Works Department, who after eight years' service is entitled to the minimum furlough allowance of £500, where the Public Works Department officer does not reach this amount till after 18 years' service, his maximum furlough allowance after eight years' service being £279 per annum, which, it must be admitted, is quite insufficient.

These small furlough allowances to Public Works Department officers result in many men being unable to take the leave which is due to them, and which a due regard for health demands. The Government of India recently, in reply to memorials from officers of the Public Works Department, replied that this matter would be enquired into by the Royal Commission, and that no useful purpose would be served by considering the prayers of the memorialists at that stage.

Privilege leave.—Privilege leave can at present be accumulated to the extent of three months and combined with furlough. It frequently happens that owing to short establishment an officer is not able to avail himself of the full period when it becomes due, and hence any additional leave earned collapses through no fault of his own. It would be a great boon if in such cases the period of three months could be extended.

Study leave.—At present when an officer on leave desires to increase his knowledge of his profession and keep abreast of modern Engineering practice, he does so entirely at his own expense and with no help or encouragement whatever from Government.

It would be in the interests of the Government of India to encourage officers to visit works when on furlough, and they should be provided with every facility for doing so.

72,114. (VI.) Conditions of Pension.—The pensions which can be earned by officers of the Imperial Branch are briefly—

	£	s.	d.
After 20 years' service	...	350	0 0
After 25 years' service	...	437	10 0

For officers appointed before 1898 there are extra pensions of £87 10s. for three years' services as Superintending Engineer, or £175 for three years as Chief Engineer. For officers appointed after 1898 this extra pension has been reduced to £87 10s. for three years as Superintending Engineer, 1st class, or Chief Engineer, given at the discretion of the Government of India, and in the cases of officers who joined after 31st December, 1909, subject to the condition that the officer must not retire voluntarily before the completion of a total qualifying service of 28 years.

This scale of pensions compares very unfavourably with those for other scientific services in India. For example, the Indian Medical Service Pensions are far more liberal, and an officer of that service can rise to a pension of £1,050 per annum, against a maximum of £525 for officers now joining the Public Works Department. Again an officer of the Indian Army can obtain a pension of £1,000 per annum, and the scale throughout is far higher than that for the Public Works Department. It is claimed that the Public Works Department should be put on the same footing in the matter of pensions as other Scientific Services.

This matter of pensions is the greatest grievance of Civil Engineer officers of the Public Works Department. The retiring pensions to which they become entitled under the existing rules are totally inadequate for their support after retirement. Moreover, their emoluments during service are not sufficient to enable them to save or make any adequate provision for their

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families should they die in harness, or to supplement their meagre pensions should they live to draw them.

Memorials have been addressed to the Secretary of State in recent years praying for an improvement in this respect, and the answer has been received that the matter comes within the scope of enquiry of the Royal Commission.

The pensions are purely personal, and cease at the death of the officer, and there is no official Family Pension Fund for the Public Works Department as in the case of the Indian Civil Service and Military Services. This inability to make suitable provision for his family is a constant source of anxiety, and it is strongly felt that there should be some means of providing for an officer's family in the event of his death.

Pension has been officially defined as deferred remuneration, i.e., that a part of an officer's salary is kept back to provide his pension. Hence it is hardly just that his family be deprived of any part of this should he die prematurely. Officers of the Public Works Department would heartily welcome a scheme worked out on an actuarial basis by which some provision could be made for their wives and families.

The existing Provident Fund does not meet such cases as it is limited to the amount plus 4 per cent. compound interest which the subscriber has paid into it, and is therefore of little avail in the case of premature decease.

72,115. (VII.) Such limitations as may exist in the Employment of Non-Europeans and the working of the existing system of division of Services into Imperial and Provincial.—The number of Indians appointed to the Imperial Service at present is 10 per cent., and there seems no reason to exceed this number at present, as there is the Provincial Service open for them. The Provincial Service is recruited from Engineers trained in Indian Colleges, and as far as the Province of Bihar and Orissa is con-

Mr. R. C. EDGE called and examined.

72,118. (Chairman.) The witness was an executive engineer of 19½ years' service and represented the thirty-one officers in the Imperial Branch of the Public Works Department of Bihar and Orissa. The department consisted of twenty-four Europeans and seven Indians, some of the latter having been recruited before the Provincial Service was established and one by the Secretary of State after the abolition of Cooper's Hill.

72,119. An examination coupled with nomination for appointment to the Public Works Department would be an improvement on the present system. The ideal age for recruiting would be twenty-two or twenty-three and it was important that a man should have had a practical experience in England before he came out. He believed that probation in India would have an adverse effect on recruitment. It might be reasonable in the interests of the service that there should be power at the earliest date to reject an officer who proved himself unsuitable. If, after two years, it was found he was unsuitable it would be less harmful to the recruit to reject him then than to reject him at a later period. It very rarely happened that a man was rejected now. From the point of view of the interests of the service rejection during the first two years would be on the whole the best, though it might possibly be hard on the recruit.

72,120. In Bihar and Orissa only one Royal Engineer had been appointed to the Public Works Department and he had not yet joined. He would like to see Royal Engineers put in the same position they would be in if they had joined the Works Department in the ordinary way.

72,121. He had no objection to the 10 per cent. rule with regard to the recruitment of Indians in England, and he thought most of the officers in the Province were of the same view.

72,122. A central college for India would offer much the best means of recruiting Indians to the superior posts of the department.

72,123. There was some discontent amongst Provincial Service officers in regard to the division of the service into two branches, Imperial and Provincial, but he had not noticed that it was very acute. If all invidious distinctions were removed and

cerned, they now come entirely from the Sibpur Engineering College.

It cannot be said that as a class they are at present equal to the Imperial Engineer, but, possibly in future and with better training they may improve, in which case it would be desirable to make the Provincial Service entirely subordinate and let all Engineer Officers—both European and Indian—be in one service with the same rates of pay. The present arrangement of having both Imperial and Provincial Engineers on one list is unsatisfactory and leads to many anomalies. An unsatisfactory feature of the present training of Provincial Engineers is that both Engineers and subordinates are trained together; one fortunate man becomes an Engineer officer, and the remainder or such as join the Public Works Department become his subordinates.

72,116. (VIII.) Relations of the Service with the Indian Civil and other Services.—The present relationship is satisfactory, and should not be altered.

72,117. (IX.) Any other points within the Term of Reference to the Royal Commission.—Officers of the Public Works Department in common with those of other services feel that the present travelling allowances when on transfer are very inadequate.

While admitting that transfer in the interest of the Public Service must inevitably involve some expense to the officer concerned, it is felt that in many cases these expenses are greater than an officer should be called upon to incur, especially when transfers are long or frequent. In the case of a married man, the actual travelling expenses of his family might well be allowed.

It has also been suggested that the provision of necessary furniture in all official residences would greatly reduce the loss due to constant buying and selling of furniture or the cost of carriage from one place to another. If necessary, some addition could be made to the rent to cover the cost of the furniture.

were higher pay given to the European in the form of a foreign service allowance the discontent would to some extent be removed.

72,124. He agreed with the observation in the memorandum from the Imperial officers of the Province that salaries on the whole were satisfactory provided an adequate pension was given, and he also agreed that the present inequalities in promotion to the grade of Superintending Engineer could be remedied by having only one class of Superintending Engineer on a time-scale running from Rs. 1,500 to Rs. 2,000 a month.

72,125. Considerable hardship and pecuniary loss was caused by the transfer of officers from one Province to another, but he was unable to give statistics to show to what extent such transfers had been made. There had recently been a case in the province where a man had been brought in from outside and had blocked everyone's promotion; he had come from the Central Provinces where promotion was better than it was in Bihar and Orissa. There were a good many instances of that kind in Bengal some years ago. From the point of view of the service there were certain advantages attached to transfers.

72,126. He did not regard the granting of furlough after eight years' service as a serious hardship. It would be to the interest of the service if certain facilities were given for study leave.

72,127. He was in favour of substituting for the present pension scheme a system under which part of the money would be in the form of a pension and part in the form of a capital sum; that would be acceptable to officers as it would enable them to leave something to their families.

72,128. (Sir Murray Hamnisch.) The most pressing grievance in the Public Works Department at present was the question of pensions. He looked on the establishment of a family pension fund as of considerable importance and desired to see a scheme introduced under which officers would be called upon to make considerable contributions towards the fund. He believed it would be popular in the service.

72,129. A young officer on first coming out probably got into debt in connection with his preliminary

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expenses, but his debts were not so serious then as they became later on in his service.

72,130. With regard to transfers, he believed that if Government supplied furnished houses it would reduce the expense of transfers very considerably. It would be quite possible for the Government to lay down a scale entitling an officer after so many years' service to the cost of removal of so many maunds of luggage, so many horses, carriages, etc. Transfers were very frequent in Bihar and Orissa and also very expensive.

72,131. (Mr. Abdur Rahim.) He had always understood that pension was deferred pay for the purpose of providing for an officer after retirement. It was only fair that Executive Engineers when they were not promoted to administrative rank through no fault of their own should be given a certain allowance. To some extent pay was regulated by the duties performed, but a man required some compensation for not being promoted owing to the fact that there was not a vacancy.

72,132. (Mr. Madge.) Practical training in England was received by a good many officers at present and he thought all officers should have it.

72,133. The paragraph in the written statement that the present training was satisfactory though it had no special reference to Indian conditions as was the case with the course at Cooper's Hill, referred to general professional education, and not to practical training. It was purely a matter of opinion, based on a man's experience, whether he favoured training in England or in India.

72,134. The only remedy he could suggest for the present grievance in connection with the Royal Engineers was to put the Royal Engineer in the place he would have occupied had he joined the service in the ordinary way. A Royal Engineer could be put in at any stage provided due consideration was given to the claims of the men in the service. It was not a question of salary but of position on the list.

72,135. (Mr. Fisher.) He had had no personal experience of the Indians who had come out under the 10 per cent. rule, but he had heard that men who had failed for the Provincial Service sometimes got into the Imperial Service in England. He would favour any scheme under which a picked number of Indians would be sent to England for training and then drafted into the Imperial Service, but he would rather have them trained at a really good central

(The witness withdrew.)

BABU JNANANJAN SAHA, Executive Engineer, Bihar and Orissa.

Written statement relating to the Public Works Department.

72,142. Under the nine heads referred to in paragraph 3 of letter, dated the 1st August 1913, from the Joint Secretary to the Royal Commission, on the Public Services in India, to the Chief Secretary to the Government of Bihar and Orissa.

Referring to the Memorandum by the Indian trained officers of Bengal, a copy of which is printed in paragraphs 71,874-81, I would say that I generally agree with it, but I would add the following notes under the different heads.

72,143. (I.) Method of Recruitment.—Recruitment both in India and in England should be—

(a) By free and open competition, and at least three candidates should compete for each appointment which is to be made in order of merit.

(b) Half in England and half in India for the present and as time goes on, the proportion of Recruitment in India should be gradually increased.

(2.) At present only one man is appointed annually to the Engineer establishment direct from Sibpur Engineering College for Bengal, Bihar and Orissa. The number should be increased to 50 per cent. of the total number of annual recruits for these provinces from England and India.

In the last five years there were 16 recruits from England and five from Sibpur. Total number being 21, annual number of recruits is nearly four. Therefore number of guaranteed appointments from Sibpur

college in India and sent to England for a year or two afterwards.

72,136. (Mr. Sly.) The system followed by the Public Works Department in connection with work was almost entirely one of petty contracts, except in the case of very large works. In the building of the capital at Bankipur work had been given to large English contractors and such contractors had also been employed on building canals, but not with much success.

72,137. Since the Province had been formed no one had been recruited to the Provincial Service and therefore he could not say what the present system of recruitment was. So far as he knew no orders had been issued with regard to not taking men from Sibpur.

72,138. The junior members of the service agreed that the question of pension was a most important one but they did not feel it so strongly as the more senior men. He had consulted all the members of the association and both young and old agreed that the matter of pension was of the first importance.

72,139. With regard to the eight year rule as to furlough, some of the junior men thought the period should be five years. He had not heard that the eight year rule deterred recruits from coming forward for the service, as they could always go home on special leave before the expiry of that period.

72,140. (Mr. Chaubal.) The witness saw no reason for increasing the 10 per cent. of Indians recruited in England so long as the Provincial Service existed. In the old days, when there was no Provincial Service, the percentage might have been thirty, but he saw no reason why it should be so high as that now. The remark in the written statement that as a class the Provincial Engineers were not at present equal to the Imperial Engineers, but that possibly in future with better training they might improve, was based on his experience in Bengal and Bihar and Orissa; confidential reports would show that the Provincial Service officer was not as good in his work as the Imperial officer. He agreed they might also show cases of unsatisfactory work on the part of Imperial Engineers.

72,141. (Mr. Green.) He had not suggested that Assistant Engineers after the eleventh year of their service should be given an allowance if there was a block in promotion but he would endorse the suggestion in the case of those who were qualified for the position of Executive Engineer.

should be increased to two every year if it is to supply the demands of the above provinces only.

(3.) Rurki College does not admit students from Assam and Burma. But successful men from this College are appointed in these provinces. This is unfair—Rurki College should be thrown open to the students from Burma and Assam. If this is not feasible, then the number of guaranteed appointments of Sibpur Engineering College should be still further increased to four every year, to meet the 50 per cent. demand of these provinces, students from which are eligible for admission into this College.

At present about forty students are admitted annually to Sibpur and they compete for a single guaranteed appointment. The number of admission, which is very large, should not be increased though the number of appointments is increased to four to meet the demands of Bengal, Bihar and Orissa, Assam and Burma.

(4.) The number of appointments in the other Engineering Colleges (Rurki, Madras and Poona) of India, should be increased in proportion to the requirements of the different provinces for which, men are trained in the above Colleges.

(5.) Course of training of Sibpur Engineering College extends over five years. After four years of training in the College classes, University examination is held, and out of the successful students a certain number is selected in order of merit for practical training of one year in the Public Works Department. Similarly a certain number of passed students from the Apprentice class of Sibpur College

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and from Dacca and Bihar School of Engineering are selected to undergo a course of practical training for one year under Public Works Department. After completion of their training the Engineer students are examined with the other students in some simpler subjects and in riding, to which marks are allotted. Marks obtained by them in workshops during their College and School training are added to the above marks. Of the Engineer students, who head the list in the above subjects obtains the guaranteed appointment and is appointed as Apprentice Engineer in Public Works Department.

This system of recruitment is unsatisfactory. Students of Sibpur Apprentice Class and of Dacca and Bihar Schools of Engineering are better trained in Workshops than the students of Sibpur Engineer class, and it does not infrequently happen that the former stands first in the combined list by virtue of their having obtained higher marks in Workshops during their school training.

Riding is absolutely necessary for the Engineers, but marks obtained in it should not in any way interfere with the position of a student secured by him in the University examination, and this is not done in any other Department. It is quite sufficient if a student can show his proficiency in riding. Similarly, marks obtained by the Engineer students in Workshops in the 1st and 2nd year class examinations, should not decide their position for the appointment. Result of the present system of recruitment is that the Engineer student who was good in Workshops during his College training and who excels in riding usually gets the appointment though he may not be as strong as others in theory and other subjects which they learn during their course of practical training in Public Works Department.

(6.) The course of training is Sibpur College which is four years at present, can be reduced, with advantage, to three years. After passing the B. E. examination the students should undergo a course of practical training for one year in Public Works Department and appointments should be given to the graduates in order of their positions in the

BABU JNANANJAN SAHA called and examined.

72,147. (Chairman.) The witness represented the Provincial Engineers, thirteen in number, of Bihar and Orissa, and occupied the position of an Executive Engineer. He received his training at Sibpur College and had been in the service for 14½ years. The written statement represented the views of the majority of the Provincial men.

72,148. He recommended the abolition of the division into Imperial and Provincial and the recruitment of a superior service partly in England and partly in India by open competition. He preferred one competitive examination for the whole of India rather than an examination in each Province, but he had no strong view on that point. He agreed that there would be the danger under a system of open competition of officers being drawn from one Province over a series of years. As a rule it was advisable that officers should occupy positions in the Public Works Department of their own Provinces.

72,149. The training of officers was adequate in the Indian colleges but he wished to see the present four years' course at Sibpur College reduced to three years, as four years was too long. One year's practical experience would be quite sufficient and the training should be carried out in India. There should be promotions from the subordinate services to the superior service, the proportion being left to the discretion of Government according to the number of officers qualified.

72,150. Temporary Engineers should be placed on a regular incremental scale, without pension. They should be recruited for a period of five or six years

University Examination provided he completes his practical training satisfactorily and can show his proficiency in riding.

72,144. (II.) System of Training and Probation.—One year's practical training in the Public Works Department in India is sufficient to qualify the successful students for appointment as Assistant Engineer. At present they are appointed as Apprentice Engineer and remain on probation for one year. This is unnecessary. Graduates after completion of their practical training should be appointed as Assistant Engineers, third grade. But for special branches of Engineering, e.g., electricity, mining, sanitation, etc., practical training may be done with advantage in England and suitable allowance should be given to the probationers for the purpose.

72,145. (III.) Conditions of Service, (IV.) Conditions of Salary, (V.) Conditions of Leave, and (VI.) Conditions of pension.—Whether an Engineer is recruited in India or in England his emoluments and other conditions noted above, should be precisely the same and should be determined solely by the work he does and responsibility he bears and should have nothing to do with the place of his recruitment.

72,146. (VII.) Limitations in the Employment of Non-Europeans and working of the existing system of division of Services in the Public Works Department into Imperial and Provincial.—Recruitment both in India and in England should be open to all British subjects equally, irrespective of caste, colour and creed.

Division of the Public Works Department into Imperial and Provincial sections has been anything but a success and has created constant heart-burning among the Provincial Officers, who do exactly the same work and bear exactly the same responsibility as the Imperial men. It is therefore urged that the said differentiation, which is illogical and unjust, should be abolished, and that the alumni of the Indian Engineering Colleges should be restored to the position they formerly occupied, that is to say, there should be only one service in the superior establishment in the Public Works Department.

on a commencing salary of Rs. 200 or Rs. 250, with annual increments of Rs. 30 or Rs. 35 and should be placed in a cadre of their own. The work done by the Temporary Engineer would be such as would be done by subdivisional officers. There were only four Temporary Engineers in Bihar and Orissa. Probably it might be a better principle to appoint Temporary Engineers merely for temporary work, as that would not necessitate so long a period as five years except in rare cases.

72,151. The pay of all officers doing the same work should be similar, but a compensation allowance might be given to those coming from England.

72,152. He did not think a family pension fund was necessary.

72,153. (Mr. Sly.) The present rule of recruitment to the service was nine from Indian colleges and five from other sources and was fixed on a basis of 30 per cent. recruited in India. Of the 70 per cent. recruited in England, 10 per cent. were Indians. Therefore so far as Indian recruitment was concerned the percentage at present was 37 per cent., as compared with 30 per cent. before the Public Service Commission. The direct recruitment from Indian colleges had been reduced but there had been an increase in the percentage of Indians recruited. The promotion of subordinates was desirable.

72,154. (Mr. Abdur Rahim.) There were no Bihari Engineers in the Public Works Department. There were no students from Bihar in Sibpur College during his time, but he did not know whether there were any there at present.

(The witness withdrew.)

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[Continued.]

W. S. DORMAN, Esq., Executive Engineer, Punjab.

Written Statement* relating to the Public Works Department, being a Memorandum of the Civil Engineers' Association.

72,155. (I.) Methods of Recruitment.—There is a strong wish among members of this Association that a residential College, on the lines of the late Royal Indian Engineering College, Coopers Hill, should be established in England, from which Imperial Engineers for the Public Works and Railway Departments would be recruited. The Association is practically unanimous in considering that the training which such a College would afford would foster an "esprit-de-corps" which is not to be anticipated among men recruited in the open market, and that this spirit and the qualities which it engenders are of the utmost value to the individual, to the Department, and to Government. The Association also considers it to be an advantage, that the students would be kept under close observation for a considerable period, and there would be less likelihood of men unsuited to the needs of India being appointed than where recruitment is made in the open market. The Association, however, realizes, having regard to the many Institutions in the British Isles which give a training in Engineering Science adequate to the needs of the Public Works Department, that the establishment of such a College may now be considered impracticable, and that selection from the open market must be accepted as an established fact.

Assuming then that recruitment by selection is maintained this Association urges that at least 50 per cent. of the members forming the Selection Committee should be senior officers of the Public Works and Railway Departments, either on the active or retired lists, as it is felt that the intimate knowledge of these Departments and their requirements possessed by such officers, would be of much value in assisting the Committee in their selection of the right class of man.

72,156. (II.) Training and Probation.—Training.—The Association suggests that it should be made a condition of appointment, that recruits should have had at least one year's practical experience on Engineering Works in the British Isles, in addition to an adequate theoretical training.

Probation.—It is considered that circumstances, which render a probationary period possible and desirable in the case of engineers appointed to State Railways, do not exist in the case of the Public Works Department. While the members of the Association in the Public Works Department consider that a probationary period is undesirable in the case of engineers appointed to the Buildings and Roads and Irrigation Branches, the views of Railway engineers are as follows:—"It not infrequently happens that men appointed as engineers on State Railways retire after a few years' service, to enter employment elsewhere. It is unquestionable that service on Indian railways offers a valuable training, and increases rather than diminishes a young engineer's prospects of securing employment on railways outside Great Britain. Railway engineers, who are members of this Association, feel that advantage should be taken of this to introduce a probationary period of service, extending to two, or at most three, years. At the close of this period the probationer would be appointed permanently, if both he and Government desired this, his probationary service counting for pension.

"Under such an arrangement Government would have an opportunity of dispensing with the services of men, who, though technically qualified and innocent of such faults as would merit their dismissal, had not proved themselves entirely suitable for the particular duties which they would be called upon to perform on Indian State Railways. No stigma would, in these circumstances, attach to failure to secure or to accept a permanent appointment, and probationers would ordinarily be in a better position

* This Written Statement was prepared by a Special Committee of the Civil Engineers' Association consisting of the following Members:—The Hon. Mr. R. P. Russell, Messrs. M. Nethersole, F. E. Gwyther, J. Coates, A. R. Astbury, R. L. Colbourne, and P. C. Young. Mr. C. D. Gee, General Secretary of the Civil Engineers' Association, acted as Secretary.

to procure appointments elsewhere, at the close of the probationary period, while Government would undoubtedly profit by the opportunity for closer selection thus afforded. In the case of State Railway Engineers, in fact, Government does not make as good a bargain as it might in view of the valuable training in Railway Engineering which the early years of service offer."

72,157. (III.) Conditions of Service.—(i) The Association urges that the cadre of the Permanent Engineers should be more frequently revised than has been the case in the past. It is advisable that the number of Permanent Engineers should more closely accord with the number of permanent appointments, and that less reliance be placed upon making up deficiencies by the employment of Temporary Engineers. In support of this suggestion the Association would call attention to the following extract from the Report of the Irrigation Commission of 1901, which, although recorded in connection with the Irrigation Branch, applies equally to all Branches. "Paragraph 306. We trust therefore, that the great importance of providing an adequate staff of Engineers for the maintenance and management of the larger irrigation works may be steadily borne in mind whenever the revision of the establishment scale is under consideration, and that it may not be supposed that temporary establishments only are required, which can be discharged or reduced when works are brought to completion. Canal management is as important a part of the duties of the Public Works Department as canal construction, and we may add that success in the design and construction of new works, depends to a great extent on the management of those which have been completed."

(ii) The conditions under which Royal Engineers are drafted into the Public Works and Railway Departments have affected adversely the position and prospects of a large number of Civil Engineers. Royal Engineers brought in are usually credited with extra departmental service to such an extent as to give them departmental seniority over Civil Engineers who are senior to them in age, and of many years standing in the Departments. The effect on a Civil Engineer thus superseded is utterly disheartening; if senior, his promotion to administrative rank is retarded, or he may even be prevented from ever reaching administrative rank, and, if junior, it may result in delaying him from being placed in a Divisional charge. Whatever form it may take, the frequent result is to subject him at one time or another to a heavy pecuniary penalty. The Association recognises that it is necessary in the interests of Government, that employment should be found for Royal Engineers in the Departments, but it is strongly urged that in justice the appointments should be made in such a manner as not to impair the prospects of Civil Engineers of the same age already serving in the Departments.

(iii) Similarly it is urged that if Government transfer any Temporary Engineers now serving in the Departments to the permanent scale, the same principle should be observed to safeguard the prospects of officers already on that scale, as in the case of Royal Engineers.

(iv) Future appointments of Temporary Engineers should only be made on the specific understanding that the holders of the same will not under any circumstances be brought on to the permanent scale. It remains with Government, if it is considered expedient, to improve the Temporary Service as such. Thus the improved provident fund for temporary employes on State Railways might be extended to all Temporary Engineers in the Public Works Department.

(v) Article 649 of the Civil Service Regulations which provides for the compulsory retirement of Civil Engineers, who on attaining the age of 50 years have not been promoted to the rank of Superintending Engineer, should, the Association thinks, be more rigidly enforced in the case of officers, who on reaching that age are reported as not qualified for promotion to the rank of Superintending Engineer.

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(vi) In paragraph 80, Volume 1, of the Public Works Department Code the principle is laid down, that promotion to the Administrative Ranks should be by a system of selection as opposed to that of seniority. This Association recommends that this principle be more closely followed than at present.

72,158. (IV.) Conditions of Salary.—*Present Scale of Pay.*—In 1908 the scale of pay of the Public Works Department was reorganized and placed on an incremental basis, but at the same time the exchange compensation formerly given to officers was withdrawn. The net increase in actual emoluments was not commensurate with the increased cost of living in India, which has been so marked a feature of the last decade.

Below proposals are advanced for the improvement of furlough and pension allowances, which will serve to alleviate those hardships which are most severely felt, and in the belief that these proposals cannot fail to receive favourable consideration the Association refrains from making specific suggestions regarding the improvement of the scale of pay generally. However, if the Royal Commission, on the careful consideration of the question in regard to other departments or services, consider that the increased cost of living deserves an increase in the salary as at present drawn, this Association urges that the Public Works and Railway Departments should participate in any such general improvements as the Commission desire to recommend.

The following cases of individual hardship which may arise owing to irregularity of recruitment are brought to notice, and suggestions put forward for their mitigation.

(i) Under the reorganization scheme of 1908 it is ruled that an officer may not draw more pay than Rs. 800 per month unless he is in charge of a division, or in charge which in the opinion of the Local Government is of equal importance. This is unjust to an officer who, though fully qualified, does not obtain a divisional charge simply because there is no vacancy for him. It is strongly urged that the rule should be amended to the effect that an officer of the Imperial Service reported as fit to hold a divisional charge, should continue to receive the ordinary increments laid down in the scale, irrespective of his being in actual divisional charge.

(ii) Under the reorganization scheme Executive Engineers attain their maximum pay of Rs. 1,250 per mensem after 19 years' service. It is urged that if, on account of there being no vacancy, an Executive Engineer, though otherwise qualified, is not promoted to Superintending Engineer's rank on completing 23 years' service, he should receive a personal allowance of Rs. 150 per mensem, and should continue to draw the same until such time as he is promoted to administrative rank.

Pay of Chief Engineers.—The present division of the rank of Chief Engineer into two classes, and the variation of local allowances as Secretary to a Local Government, gives rise to the anomaly that a Chief Engineer may be drawing less emoluments than a Chief Engineer junior to him in service in another province, although the work and responsibilities attached to all such posts are exactly similar.

The pay of a first class Chief Engineer is generally equal to that of a Commissioner of a division, and whereas the area, over which the latter exercises control, constitutes only a small portion of a Province, the responsibility of the former extends over a whole Province. The number of Chief Engineer's throughout the whole of India is small, and with the exception of the post of Secretary to the Government of India in the Public Works Department and that of Inspector General of Irrigation, they are the only highly paid posts to which an officer of the Public Works Department can hope to attain. On the other hand there are a number of Commissioners in each Province in addition to many other high offices, both with Local Governments and with the Government of India, which fall to the lot of officers of the Indian Civil Service. Having regard to these facts it is not considered too much to urge, that there should be only one class of Chief Engineer, and that the salary attached to the appointment should be Rs. 3,000 per mensem irrespective of whether a Secretaryship to a Local Government goes with the appointment or not. In this event the local allowance of Rs. 250 or 150 a month, accord-

ing to whether a Chief Engineer is a Secretary to a Local Government or Local Administration, might be withdrawn.

As regards Chief Engineers in the Railway Department the remarks which have been made as to the responsibilities of Chief Engineers in the Public Works Department "*mutatis mutandis*" apply, while the present pay of the Engineers-in-Chief of State Railways in India compares most unfavourably with that of men in a similar position in different parts of the world.

Secretary to the Government of India in the Public Works Department.—For reasons similar to the foregoing, it is considered that the duties and responsibilities attaching to the post of Secretary to the Government of India in the Public Works Department, which appointment is invariably held by an officer specially selected from among Chief Engineers and usually of much longer service than any other Secretary to the Government of India, warrant the appointment being paid at the same rate as Secretaries in the Home, Finance, and Commerce and Industry Departments, viz.:—Rs. 4,000 per mensem.

72,159. (V.) Conditions of Leave.—*Furlough.*—The amount of furlough, which Imperial Officers of the Public Works and Railway Departments appointed in England can earn is generally considered sufficient. The rules governing the grant of furlough are practically identical with those which apply to the Indian Civil Service and Military Officers subject to Civil leave rules; except in the most important particular of leave allowances. In the case of officers of the Indian Civil Service and Military Officers under Civil leave rules, furlough allowances are subject, if paid at the Home Treasury, to a minimum limit of £500 per annum, or the salary last drawn, whichever is less, and to a maximum limit of £1,000 per annum; whereas for Civil Engineer Officers of the Public Works Department there is no minimum limit and the maximum has been fixed at £800 per annum. The present furlough allowances permissible to Imperial Civil Engineers are as follows:—

Years of completed Service.	Maximum furlough pay.
8	279
9	297
10	316½
11	337½
12	360
13	382½
14	405
15	427½
16	450
17	472½
18	495
19	517½
20	540
21	555
22	562½
3 years as Superintending Engineer, 3rd grade.	675
3 years as Superintending Engineer, 2nd grade.	787½
Thereafter...	800

As long ago as 1870, in Despatch No. 43 P. W., dated 28th March, the Government of India said:—"Section 16 with reference to paragraph 4 of Your Grace's Despatch under reply, we may remark that we have already recommended the equalization of the pay of the Military Branches of the Department, and we are gratified to find this proof that Her Majesty's Government are likely to receive that proposal favourably. On this point we only add that we shall be glad to see some plan adopted by which the furlough allowances of Civil Engineers shall be equalized with those of Military Officers in the Public Works Department and, so far as practicable, the advantages of pension also." This hope has been reiterated many times by the Government of India and by different Secretaries of State since the date of that Despatch. It is, however, a hope that remains unrealized up to the present day, since a Royal Engineer in the Public Works Department, with 8 years' service to his credit, is entitled to almost double the furlough allowances of a Civil Engineer Officer doing exactly the same class

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of work and having the same service in the Department. A Civil Engineer is obliged to complete 18 years' service before he can claim an allowance approaching that which a Royal Engineer is entitled to after 8 years' service.

The present allowances are so inadequate that a large majority of officers cannot avail themselves of the furlough due to them, even though the state of their health urgently demands that they should do so. That such is the case is assuredly not in the best interests of the general Administration. The question of leave allowance is raised in the last paragraph of the Memorials recently submitted by officers of these Departments; copies of which are attached to this Memorandum as Appendices 2 and 3. The reply given to the Memorialists by the Government of India was that:—".....Pensions and leave are subjects of reference to the Public Services Commission, and as no doubt the Commission will inquire into these matters and submit recommendations, the Government of India consider that no useful purpose will be served by considering the prayers of the memorialists at this stage." (Government of India's letter, Public Works Department, No. 1399-1408 E, dated July 23rd 1913.)

In these circumstances it is confidently hoped that the Royal Commission will be able to recommend that the leave allowances sanctioned for officers of the Indian Civil Service, and Military Officers subject to civil leave rules, may be made applicable to Civil Engineer Officers of the Public Works and Railway Departments on the Imperial list. There is no valid reason why they should receive less favourable treatment than the other officers named. It is pointed out that feeling on this question is very strong, and that communications received from members of this Association show that there is great discontent throughout both Departments regarding the inadequacy of leave allowances.

It is urged that where the allowances are drawn in India they should be paid in the equivalent in rupees, at fifteen rupees to the pound sterling.

Furlough earned by an officer should be granted at any time after the completion of eight years' service, subject to the exigencies of the service, unless the applicant has returned within eighteen months from privilege leave covering a period of three months.

Special Leave.—The existing rules regarding the grant of special leave require no alterations, but the allowances should be the same as in the case of furlough.

Privilege Leave.—(i) Under the present rules an officer can earn privilege leave to the extent of one calendar month for every eleven complete calendar months of duty, and such leave is cumulative up to a period of three months only. In the case of officers who have accumulated the full period it frequently happens that the exigencies of the public service prevent their being granted privilege leave when they desire it, and this leads to the leave lapsing through no fault of their own. It would in a measure mitigate against this loss of leave on full pay which an officer has fairly earned, if the cumulative period were extended from three to six months.

(ii) An officer should be allowed to avail himself of all privilege leave due to him immediately prior to retirement, and be permitted to retire from the service at the end of his leave, without having to return to duty as he is now obliged to do. This concession has already been made where privilege leave is combined with other leave, and its extension to privilege leave alone, besides removing a legitimate grievance among officers of the Departments, would lead to much less administrative inconvenience than is now the case.

Study Leave.—Modern Civil Engineering is a highly specialized profession and progress in the methods of construction is very rapid. In view of the vast undertakings of the Government of India in the Public Works and Railway Departments, it is essential for efficiency and economy, that the Engineering Staffs of these Departments should keep themselves abreast of modern engineering practice. Engineers can only accomplish this by visiting and studying works of special interest in progress in different parts of the world. That the importance of

this is recognized by other nationalities is instanced by the number of engineers who are commissioned by their respective Governments or private employers, to visit works in India, in order to study Indian methods. The majority of Civil Engineers serving in these Departments who wish to visit works in the British Isles, and other countries, have to do so as private individuals, and entirely at their own expense unless they are placed on deputation, or are specially permitted to visit certain works while on leave, permission in this case usually being given only when Government require special information regarding a particular aspect of a project. In the latter case certain travelling and other expenses are allowed, but the time spent in the visits counts against the officer's period of leave. This Association recommends that officers of the Public Works and Railway Departments should be encouraged to visit works outside India, and that they should be provided with every facility for doing so. The Association thinks that either new rules should be introduced to admit of these facilities being granted, or that there should be a much more liberal interpretation of the existing rules regarding the placing of an officer on deputation.

The following instance of study leave obtaining in another professional service is cited.—In the Indian Medical Service study leave is granted in England up to one year out of total service in addition to furlough, for the purpose of allowing an officer to study any particular aspect of his profession which he may desire. During this period he receives furlough pay and lodging allowance amounting to four to eight shillings per day.

72,160. (VI.) Conditions of Pension.—*Retiring Pension.*—The greatest grievance of Civil Engineer officers of the Public Works and Railway Departments and one which is most sorely felt is the totally inadequate retiring pension to which they become entitled under the existing rules. Many efforts have been made, spread over a period of forty years or more, to obtain amelioration in this respect. Both the Government of India and different Secretaries of State have long recognized that all was not well, and new rules and conditions have been introduced to improve matters, but the net result has been that the present pensions are actually less than they were 40 years ago, when the qualifications demanded from men joining the service were not as high as they are now, and when the cost of living was considerably less. A short history of the Public Works Department pension rules is attached to this Memorandum, Annexure V. Numerous memorials on this subject have been submitted to the Government of India and H.M.'s Secretary of State during the last 6 years by officers of these Departments. Copies of these are given in Annexures I, II, III attached*. The first memorials were submitted in 1907, but the petitioners were favoured with no reply up to August 1912, when they were informed by the Government of India in their letter No. 942-E., dated 30th August 1912, Annexure 4, that no decision could be arrived at pending the receipt of the report of the Royal Commission on the Public Services in India. It is to the Royal Commission, therefore, that the Civil Engineer Officers now look for redress of this long standing grievance, and it is strongly and respectfully urged that the scale of pensions prayed for in the memorials of 1912-13, Annexures 2 and 3, is the least which can in equity be recommended.

Further, that as this grievance was brought prominently to the notice of the Government of India, in the memorials of 1907-08, to which they vouchsafed no reply, and as in the meantime a number of officers affected have been placed on the retired list and many more will probably be called upon to retire before a decision is arrived at, any improvements made in the scale of pensions should have retrospective effect, at least from the year 1908.

Invalid Pensions.—Prior to 1884, invalid pensions granted to Civil Engineer Officers of the Public Works Department on the Imperial List were governed by article 474 of the Civil Service Regulations; this article also governed the pensions of all officers belonging to the *Uncovenanted Services as then termed*. In Lord Kimberley's Despatch of 1883 referred to on page 4 of this Memorandum, (*vide* Annexure V.

* *vide* Appendix XIII.

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page 147), a new scale was introduced for Imperial Engineers and Telegraph Officers, with a view to ameliorating their conditions of service, this scale is covered by article 641 of the Civil Service Regulations. Under this article the scale has been increased from $\frac{1}{10}$ ths of average salary for 10 years completed service, $\frac{1}{10}$ ths for 11 years, and so on, to $\frac{2}{10}$ ths for ten years, $\frac{3}{10}$ ths for 11 years and so on, but at the same time the maxima limits have been reduced from those allowed by article 474. How this rule brought in with the object of improving conditions in certain Services adversely affects officers at the present time, and how much better off an invalided engineer would have been under Civil Service Regulations, Article 474 is clearly shown from a comparison of the columns in the table below.

Years of completed service.	Civil Service Regulations, Art. 641.		Civil Service Regulations, Art. 474.	
	Amount calculated on a percentage basis.	Fixed maximum.	Amount calculated on a percentage basis.	Fixed maximum.
1	2	3	4	5
		Rs.	Rs.	
10	20	2,813	1,600	10
	60			60
11	21	3,150	1,400	11
	60			60
12	22	3,520	1,800	12
	60			60
13	23	3,910	2,200	13
	60			60
14	24	4,320	2,600	14
	60			60
15	25	4,750	3,000	15
	60			60
16	26	5,200	3,000	16
	60			60
17	27	5,670	3,000	17
	60			60
18	28	6,160	3,000	18
	60			60
19	29	6,670	3,000	19
	60			60
20	30	7,200	4,000	20
	60			60

It is a decided anomaly that officers of other services coming under Civil Service Regulations Article 474 and drawing the same pay as an Engineer, should, if invalided, be entitled to a higher pension after 10, 11, 12, 13, 16, 17, 18 and 19 years completed service and to a less pension after 14 or 15 years service. It is urged, therefore, that to remove the anomalies pointed out, and to make article 641 of real benefit to Civil Engineer Officers now serving in the Department that the maxima limits should be at least the same as those fixed according to Article 474. Unlike the Indian Civil Service and the Military Services in India, there is no official Family Pension Fund for the Public Works and Railway Departments. The emoluments of officers in these Departments are not sufficient to admit of their making adequate provision for their families should they die in harness. The knowledge that they are unable to make such provision is a constant source of anxiety to many officers who are entirely dependant on their salary, and whose duties constantly

take them into situations, which are prejudicial to health. They have also the additional anxiety of knowing that their pensions are purely personal and cease with their death. There is a strong desire, therefore, that means may be found whereby an officer may be aided in making suitable provision against the event of his death for the members of his family dependent upon him. Pension has been officially defined as deferred remuneration, which means that a certain portion of the salary which would have been paid to an officer, had there been no pension attached to his appointment, is kept back to provide for a pension on retirement. This view is corroborated by the fact that when an officer is transferred on Foreign Service he is made to contribute towards the cost of his pension at the rate of one-sixth of the pay he would have received had he remained in the service of the Government of India. It may be presumed, it therefore, that an officer only receives six-sevenths of the pay he would have received had there been no pension to provide for, and that one-seventh is kept back by Government as the officer's contribution towards his pension fund. If the officer had the option of investing the amount assumed to be retained by Government to provide for an annuity with a private Insurance Company, he could probably so arrange the terms, that a portion of his annuity would be assured to his widow or other member of his family dependent upon him, should his death take place within a certain number of years from the date his annuity fell due, with the additional security that his family would be covered against the risk of his death, should it take place during the time he was subscribing to his annuity, in the guarantee of a considerable sum of money. Could some such scheme be worked out by Government on an actuarial basis a large number of officers, not only in the Public Works Department but in other services similarly unprotected, would be glad to avail themselves of it and to subscribe towards the extra cost.

There is a strong wish among the members of this Association, that there should be one set of leave and pension rules for all Civil Engineer Officers on the Imperial List, irrespective of the source from which they were recruited. Such differentiations as still exist should the Association considers be abolished.

72,161. (VII.) Such limitations as may exist in the Employment of Non-Europeans and working of the existing system of division of Services into Imperial and Provincial.—As regards the employment of Indians in the Imperial Branch of the Public Works and Railway Departments, the majority of the members of this Association consider that the European element must largely preponderate for a good many years to come to admit of the present standard of efficiency being maintained. The number of appointments to the Imperial Service which may at the present time be reserved for Indians is ten per cent., and this number should, it is considered, not be exceeded at present.

The Association does not feel called upon to express any views regarding the division into Imperial and Provincial Services as it is a question outside its scope, neither does the Association consider it within its province to make suggestions regarding the constitution of the Provincial Branch of the Department.

72,162. (VIII.) Relationship of the Service to the Indian Civil Service and other Services.—It is considered that the relationship as existing between the Public Works and Railway Departments and other Services in India is on the whole satisfactory and should remain unaltered.

72,163. (IX.) Any other points within the Terms of Reference to the Royal Commission not covered by the preceding Heads.—*Travelling Allowance on Transfer.*—The Association desires to bring to the notice of the Commission the inadequacy of the existing Travelling Allowance Rules in the case of Transfers. The Association is aware that the question is common to other Departments. While admitting that transfers in the interests of the Public Service must inevitably involve some expense to the officers transferred, and the practical impossibility of framing any rules suitable to all cases that will obviate it, they consider that the actual out-of-pocket expenses, especially in the case of long trans-

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fers, are frequently more than an officer should be called upon to incur, and often amount to a distinct hardship. The Association believes that the question was under the consideration of the Government of India some six or seven years ago and would suggest that the question be again considered with a view to the present rules, which contain several anomalies, being made more liberal.

General Provident Fund.—Under the rules of this Fund interest on the account of a deceased depositor ceases from the date of tender of payment to the person legally entitled to receive the balance at credit of the account. It frequently happens that from inexperience in matters of the kind and other causes, it is inconvenient to draw the amount immediately on tender of payment being made. The Association therefore suggests, that it should be permissible for the balance at credit of the account to remain for a reasonable period after tender of payment has been made and to continue to draw interest during that period.

Inadequate recognition in the Honours Lists.—There has been for a very long time a growing dissatisfaction among Engineers in India with the Honours distribution, which has resulted in what is felt to be an implied public slur on the profession. It is felt that the power to confer Honours on the Public Services was entrusted to the General Administration as a means of giving public recognition to individual merit impartially to all public servants deserving such recognition, and that given impartial

exercise of this power, the Honours List would be, to some extent, an index of appreciation by the Administration of services rendered by any given branch of the Service. Judged by this standard, a study of the Honours List indicates a marked lack of appreciation of services rendered by the Engineers of the Public Works and Railway Departments which is felt to be unjust. There is, so far as is known, no other country in the world, where a similar system of Public Service Honours obtains, in which the Engineering profession is held in such light esteem, as is evidenced in the Honours List in India, while, certainly in some of its aspects, the work of the Department in India stands out prominently as of a high order of merit, as has frequently been proved by the deputation of Indian Engineers to other countries as experts in their particular profession.

Although it is not definitely known to the Association what system is followed in framing the Honours Lists, it is generally believed that the results, which are the subject of dissatisfaction, are due to the fact that the recommendations are almost exclusively in the hands of the Civil Service, and that this has led to a gradually increasing tendency to restrict Honours unduly to that Branch of the Service.

It is believed that if the matter is considered worthy of notice by the Commission, an expression of opinion by them would carry much weight and lead to rectification of what is a very substantial grievance. The figures given below speak for themselves.

Statement comparing Honours granted in the Indian Civil Service and those granted in the Public Works Department for each Province. Abstracted from the Civil Lists, April 1913.

	Bengal.	Bombay.	Madras.	Assam.	Bihar.	Burma.	Central Pro.	N.W. F.P.	Punjab.	United Pro.	Totals.
India Civil Service:—											
C. I. E.	11	9	11	3	6	5	6	4	17	12	84
C. S. I.	5	7	7	3	8	9	3	—	9	10	61
Kt.	—	—	1	—	—	—	—	—	1	2	4
K. C. I. E.	—	1	1	1	—	1	1	—	4	1	10
K. C. S. I.	1	2	2	—	3	1	2	—	—	2	13
Total Honours	17	19	22	7	17	16	12	4	31	27	172
Cadres	176	180	176	5	111	171	110	39	170	243	1,426
Per cent.	9.7	10.5	12.5	14.0	15.4	9.4	11.0	10.0	18.2	11.1	12.0
Public Works Department:—											
C. I. E.	1	—	1	—	—	1	2	1	2	3	11
C. S. I.	1	—	—	—	—	—	1	—	2	—	4
Total Honours	2	—	1	—	—	1	3	1	4	3	15
Cadres	46	103	101	24	48	92	51	24	165	116	770
Per cent.	4.4	—	1	—	—	1.1	2.9	4.0	2.4	2.6	2.0

Statement comparing Honours granted to officers serving in various departments in the Government of India Secretariats.

Departments.	Home.	Education.	Legislative.	Foreign.	Revenue.	Commerce.	Finance.	Railways.	Total of all Departments.	P.W.D.
Number of Officers	10	8	2	7	9	15	6	10	75	8
Number of Honours	4	6	2	9	5	5	5	9	45	—
Percentages	40	75	100	130	55	33	83	90	60	—

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ANNEXURE I.

Purport of Memorials submitted in 1907-08.
(Vide Appendix No. XIII.)

ANNEXURE II.

Memorial of 1912. (Vide Appendix No. XIII.)

ANNEXURE III.

Memorial of 1913. (Vide Appendix No. XIII.)

ANNEXURE NO. IV.

Letter No. 942E. (Vide Appendix XIII.)

ANNEXURE NO. V.

Short History of the Public Works Department Pension Rules.

Prior to 1884 the Pension Rules for the Public Works Department were identical with those in force for all other services outside what was known as the Covenanted Service. These rules had their birth in 1831, when the following rules were drawn up for subordinate officers of the Civil Department, excluding sowars, jemadars, &c.

The officers were divided into two classes, i.e.,

- (1.) Law officers and native judges, with whom were subsequently included educational officers, and
- (2.) All others in superior services.

The rules were briefly as follows:—

- (1.) No pension could be claimed by any officer unless incapacitated for further service by old age, protracted ill-health, or other infirmity.
- (2.) Subject to this proviso a pension not exceeding one third of salary could be claimed by Class 1 after fifteen years service, and by Class 2 after twenty years service. After twenty-two years service, Class 1 could claim an increased pension not exceeding half salary; Class 2 had the same privilege after completing thirty years service.
- (3.) At first there was no limit of age from which pensionable service commenced; subsequently the limit was fixed at 16.

The principal points to observe about the above rules are that there was no maximum limit of pension, and these were not retiring pensions, but could only be claimed by persons incapacitated for further service.

The result of no maximum having been fixed was that when uncovenanted officers began to obtain the higher appointments they were able to claim pension much in excess of anything contemplated by the Court of Directors, and consequently in 1855 a rule was introduced limiting the pensions to £500 per annum for uncovenanted officers "hereafter appointed to the service." In some cases the pension sanctioned under the old rules had been as much as £900.

In 1862 the Bombay Government proposed that every officer appointed before 1855 should, on promotion to a salary of Rs. 10,000 per annum or upwards be called upon to renounce his claim to a pension of more than £500 a year. With this however the Government of India did not altogether agree, and in submitting the proposals to the Secretary of State pointed out, that the original rules which had been framed chiefly in reference to natives of India, among whom it is probable that no salary higher than Rs. 500 or Rs. 600 per mensem would have been

found, merely fixed a maximum which was not to be exceeded; and that while the Government would be quite justified in framing new pension rules which would be applicable to all classes of appointments, it was a somewhat doubtful proceeding to refuse promotion to a deserving officer unless he would consent to abandon that to which it was assumed he had a right under the existing rules. In reply the Secretary of State considered, that when the rules were framed a larger pension than £500 could never have been contemplated, and laid down that the full pension should not be given as a matter of course, but only awarded in case of extraordinary merit.

This correspondence led up to the Revised rules of 1864, applicable to the whole of the uncovenanted services of India. These may be briefly summarized as follows:—

- (1.) An officer, on production of a medical certificate of unfitness for further service in India, could claim—(a) If under 15 years service, a gratuity not exceeding 12 months' pay; (b) after 15 years' service, one third of salary, subject to maximum of Rs. 3,000 and 2,000 according as the salary was above or below 1,000 a month; and (c) after 25 years, one half of salary, subject to a maximum of Rs. 5,000 and Rs. 4,000, according as the salary was above or below Rs. 1,000 a month.

- (2.) After 30 years' service a retiring pension (i.e. without medical certificate) of one-half of salary subject to the maximum limit of Rs. 5,000 and Rs. 4,000 could be claimed as the reward of 30 years' faithful and efficient service.

The limit of age from which pensionable service counted was raised from 16 to 22 and it was ruled that privilege leave in India was the only leave which could be counted towards pension. At the same time provision was made for the payment of pensions through the Home Treasury.

In 1855 a few English trained Civil Engineers with some practical experience had been sent out for the first time by the Court of Directors, and with reference to these the Hon'ble the President in Council was pleased to resolve that "such of the uncovenanted servants of the Public Works Department as receive above Rs. 10 a month of salary, should be entitled to a superannuation pension under the provision of the Pension Rules of the 4th January 1831, but that in no case should a larger pension than £500 or Rs. 5,000 per annum be granted to uncovenanted servants receiving salaries above Rs. 1,000 per mensem whether the retirement may be from ill-health (after either 20 or 30 years' service), or without a medical certificate after 35 years' service."

The regular appointment of Civil Engineers from home in large numbers was only commenced by Lord Stanley in 1859, after the Mutiny, when the administration of the country had been taken over by the Crown.

The position of these men as regards the general pension rules was defined in Despatch No. 84, dated 31st March 1865, when the Secretary of State ruled that "Civil Engineers who entered into covenants when the old uncovenanted Leave and Pension Rules were in force" might be allowed "the benefit of those rules in regard both to leave of absence and pension, and any covenanted Engineer so situated may have the option of selecting which rules he will abide by, but having once made his selection he is not to be permitted to avail himself of any of the advantages of the other rules."

This concession to Covenanted Civil Engineers and certain Civil Covenanted Officers of the Telegraph Department who entered the service before 1864 was finally summarised in Financial Department Resolution No. 1555,* dated 1st July 1870, where it is stated

- * (1) Officers entering the service before 1855.
(2) Covenanted Civil Engineers in the Public Works Department and certain Civil Covenanted Officers of the Telegraph Department who entered the service before the promulgation of the new rules, and have elected to abide by the Pension Rules.
(3) Native judges who were in the service on 26th October 1866.

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that "limitation prescribed by the Uncovenanted Service Pension Rules of April 1864 in regard to the third and one-half pensions do not apply to the uncovenanted servants of the three cases noted in the margin. Ordinarily the limit of pension for these classes of servants will be £500 per annum.

All Civil Engineers appointed subsequently to 1864 came under the new rules promulgated in that year for the uncovenanted service generally, but in 1869 the disadvantageous position in which they were placed as compared with their Royal Engineer confrères doing exactly the same work in the Department, was recognised by the Government of India; and in Circular No. 84 P. W., dated 6th October 1869, referring to the position of the Civil Engineers it was stated that "the Government of India has lately had before it proposals which it is hoped will take early effect, for improving their position generally, and placing them in respect of their emoluments on precisely the same footing as all other officers employed on the same duties."

The Government of India proposals were more clearly defined in their Despatch of 28th March 1870, to the Secretary of State, an extract from which reads as follows:—

"We may remark that we have already recommended the equalisation of the pay of the Military and Civil branches of the Department, and we are gratified to find this proof that Her Majesty's Government are likely to receive that proposal favourably. On this point we only add, that we shall be glad to see some plan adopted by which the furlough allowances of Civil Engineers shall be equalised with those of Military Officers in the Public Works Department, and so far as practicable their advantages of pension also."

Government machinery moves slowly, and matters seem to have remained at this stage till 1883, when Lord Kimberley, then Secretary of State for India, announced in a despatch that the Public Works Department Officers were no longer to remain under the general uncovenanted service rules, but that a special chapter was to be introduced into the pension code to meet their case. Accordingly in 1884, what are known as the more favourable pension rules came into force and the following privileges were accorded to English trained Engineers and Telegraph Officers:—

- (1) The right of claiming a pension up to Rs. 4,000 on completing 20 years' service and up to Rs. 5,000 on the completion of 25 years' service (the pension is reckoned at 1s. 9d. to the rupee).

- (2) Additional pensions of Rs. 1,000 and 2,000 over the above maximum limit for three years' service as Superintending and Chief Engineer respectively.

- (3) The right of counting the following periods of furlough as pensionable service (Civil Service Regulation 408):—

2 years in 20 years' service
3 " " 25 " "
4 " " 30 " "
5 " " 35 " "

- (4) The right of adding a period not exceeding three years to their pensionable service on account of previous experience in their profession. The regulation regarding the counting of previous professional experience towards pension is no longer in force.

After having been in existence for 14 years, the Chief Engineer and Superintending Engineer special pensions were abolished in 1898. Officers however who have shown special energy and efficiency during an effective service of three years as Chief Engineer, or first grade Superintending Engineer, may, at the discretion of the Government of India, be allowed an additional pension of Rs. 1,000 a year, subject in the case of entrants to Government Service after 31st December 1909, to the condition that the officer must not retire voluntarily before the completion of a total qualifying service of 23 years (Civil Service Regulation 643).

The actual pension earned is still regulated by the maximum fixed in 1864, and compares very unfavourably with what is nominally earned on the percentage basis.

Pension has been officially defined as an officer's deferred remuneration, and hence should bear a

definite relation to the amount of salary. It is obviously due either to the officer himself as a provision for his old age on retirement, or else to those dependent on him in the event of his dying in harness. In the case of an officer going on foreign service all contributions made towards that officer's pension are calculated on a percentage of salary basis and consequently the logical way of calculating the pension itself would seem to be on the same basis. At present the great drop of income on superannuation in the case of an officer who has devoted the best years of his life, to the service of India, necessitates on retirement an almost complete severance from his former life, inasmuch as, in order to live on his reduced income he has to set up house in a humbler way among more humble surroundings. This is obviously a hardship, and almost inevitably forces a married officer with children to educate and start in life to again seek employment, either at home or outside the Department in India, at an age when, owing to the unfavourable conditions under which he has worked in India, he is no longer considered by Government as fit for duty. On superannuation under such circumstances an officer is entitled to a sufficient superannuation allowance to enable him to live in honourable retirement in approximately the same state as he has been encouraged to live during his 25 or 30 years in India, and not to be forced, in premature old age, to dispense with any little luxuries to which he may have been accustomed.

Amount of Pension.—The amount of the pension was limited to a maximum of Rs. 5,000 in the 1864 rules and though this has never been specifically declared to be the equivalent of £500, such was obviously the intention at the time, and this was the equivalent paid in England under the rules till the official rate of exchange began to drop in the early seventies. This £500 payable in England was on exactly the same footing as the £1,000 payable to the covenanted service, and it is very evident that this limit was fixed as the moiety of the pension of the covenanted service which the Government at the time undertook to contribute.

In 1870 the Presidency Annuity Funds were abolished, and Government undertook to provide every Civil Servant who had completed 25 years' service, of which 21 had been spent in India, with an annuity of £1,000 payable in England. Towards this the officer was to continue to contribute throughout his service 4 per cent. of his salary.

Previous to 1862, a Civilian, in the event of his subscription falling short of what would cover his own moiety of his annuity, had to pay up the balance in a lump sum, on retirement, but in 1862, the Secretary of State decided that the Government should be assumed to provide £600 as its share, and that at least the balance should be provided by the annuitant from his subscriptions to the fund. This however only benefited those who had not contributed largely to the funds.

It is difficult to say how much a Civilian at the present actually contributes towards his annuity, but actuarial calculations made by the European Civil Service Association in reply to a speech made by Sir J. Gorst in the House of Commons in 1889, brought out the fact that with the rupee at 1s. 4d. a civilian on the average contributes at the rate of 4 per cent. of his salary, only sufficient for an annuity of £300 on retirement, leaving Government to make up the remaining £700.

This is also the amount of the pension ordinarily granted by Government in the case of the Indian Army, the I. M. S. and the R. E. Officer subject to the Civil Rules, and it is on this basis that the Imperial Engineer, with his equally expensive training asserts his right to a £700 pension after 30 years' service.

As matters now stand it would often pay an able man to retire on completing twenty years' service when he would be entitled to a Rs. 4,000 pension. Such a man would be at his prime and would probably not have much difficulty in finding suitable remunerative employment elsewhere. By judiciously investing his pension, in ten years he would have accumulated half a lakh, and this amount at 4 per cent. would

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provide an additional income of £175 in perpetuity, while he would be under no obligation of retiring on his fifty-fifth birthday. If the money were invested in an annuity it would supplement the pension to a

MR. W. S. DORMAN called and examined.

72,164. (Chairman.) The witness represented the Civil Engineers' Association, which numbered 560 members drawn from all Provinces in India, and which included 48 Indians out of 65 in the Imperial Service. The Association was confined to men in the Imperial branch of the service and those who have retired.

72,165. The members of the Association were practically unanimous in considering that the training should be at a college on the lines of Cooper's Hill as it would be of advantage to the service in fostering esprit de corps, but they recognised that there would be difficulties in the way of re-establishing such a college.

72,166. He could not say what the views of the members would be with regard to a competitive examination coupled with nomination in substitution for the present system of selection by the Secretary of State. That was the system in force prior to the formation of Cooper's Hill, and recently he had come across a note recorded by the Institution of Civil Engineers in 1871 in which they pointed out that the system in force prior to the formation of Cooper's Hill was bound to lead to disappointment as it in no way tested any of the qualifications of an engineer except a retentive memory and a certain aptitude for figures, and the Institution appeared to think that competition was bound to fail.

72,167. The present age at which recruits joined the service, was satisfactory; whether they should join earlier was a matter of opinion.

72,168. The best qualifying test for a candidate who submitted himself for selection would be one of the University Degrees recognised by the Institution of Civil Engineers as exempting from their own examination. He thought the approved Universities included all the representative colleges in England as well as the McGill University in Montreal, the University of New Zealand and the Sydney University.

72,169. The balance of opinion in the Association was in favour of a year's practical training in England. If opportunities were offered, however, in the shape of big operations in India there were advantages in a training in India. Personally he believed that some elasticity should be allowed so that when large operations were going on in India a recruit might be sent out at once.

72,170. With reference to the division of the service into Imperial and Provincial branches, the Association had decided that this question was outside their scope and that any opinions upon it might be left to individual members. There was undoubtedly a certain amount of discontent with the present system, and that discontent must naturally react injuriously upon the service. The Association had not considered whether the discontent would be removed by the abolition of the invidious distinctions in regard to service, title, etc., but personally he believed the removal of those distinctions would largely tend to remove the discontent.

72,171. The mandatory rule that 10 per cent. of the vacancies in the Imperial Service should be reserved for Indians ought to be abolished. If the 10 per cent. was retained the field should be made wider so that when an eligible candidate was not to be found in England he could be drawn from India.

72,172. He thought a central college in India would have many advantages but did not know sufficient about the present colleges to offer any useful criticisms.

72,173. Engineers in the Public Works Department were not against a period of probation, but feared that candidates might not come forward if a probationary period was established. There was nothing undesirable about it. Personally he did not think it would be difficult to obtain recruits on probation. In the interests of the service it would be a good thing to be able to get rid of an unsuitable man and it would also be of benefit to the probationer if he were sent away as early as possible in his career.

72,174. With regard to the appointment of Royal

figure far beyond what the officer would have received on superannuation had he remained in Government Service until compelled to retire under the fifty-five year rule.

Engineers being so made as not to impair the prospects of civil engineers of the same standing, the Association did not mean that when brought in they should be placed at the bottom of the list for purposes of seniority. At present a Royal Engineer coming into the department counted for promotion in the department as though his service began two and a half years after the date of his first commission. That rule was introduced in order to put Royal Engineer Officers on a level with Cooper's Hill men of the same age. Now that men being recruited from the open market were on the average older than the Cooper's Hill men that period of two and a half years might have to be modified in future so as to keep the two classes on an equality. The average age of Cooper's Hill men was about twenty-two, while the average now was twenty-three to twenty-four. If civilians could be recruited at twenty-two, the two and a half years would still be fair to the Royal Engineer. Provided there was equality of age he had no objection to a Royal Engineer being brought into the Department somewhere above the bottom of the list. Hardship occurred at times, however, for instance, in his own Province two men came out from Cooper's Hill in the same year and two Royal Engineers from the same Chatham batch subsequently entered the department, one some time ago, and one recently with the rank of an Executive Engineer; they had gone into the same year as the Cooper's Hill men, but it happened that their seniority counted about a fortnight earlier than the two Cooper's Hill men, and other things being equal the latter would suffer in the long run when it came to promotion to the administrative grades.

72,175. The Association laid the greatest emphasis on improved pension and leave allowance. If an increase were made in the amount of pension the officers would be content with the present scale of salaries. If improvements in the pension were made conditional on the abolition of the twenty years retiring pension the junior men would probably raise an outcry. The concessions of optional retirement after twenty years had not been taken advantage of to a large extent, but men in the department looked forward to the possibility of being able to retire after that length of service. It was only when a serious block was impending that the privilege was likely to be taken advantage of to any great extent. It did not do any harm and Government did not suffer. The officers did not ask for any improvement in the pension paid after twenty years as there was no desire to encourage early retirements but they wanted some improvement in the pension paid for more than twenty years' service. Personally he believed if the pension was improved the abolition of the twenty years' period would be a reasonable condition.

72,176. The service very much desired a family pension fund to be established, guaranteed and subsidised by Government. The officers were quite prepared to contribute and would accept the fund if it had a Government guarantee behind it.

72,177. Officers were deterred from taking leave because they could not afford it. It was practically impossible for a married officer to save anything out of his salary beyond his Provident fund contributions; and the leave allowance of a junior officer was very inadequate.

72,178. There was some feeling in the service with regard to the Honours List, but it was not a point upon which much emphasis was laid.

72,179. (Sir Murray Hammett.) The Crystal Palace School of Engineering was not one of the recognised colleges on the list of the Institution of Civil Engineers. Many Indians went to the school, but personally he had not much confidence in it.

72,180. (Sir Valentine Chirol.) Bringing out trained engineers on a terminal contract for five years would not meet the requirements of the department. The men brought out would be much older than the men who came out on probation and would not be suitable men to bring in at the bottom of the cadre. If

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young men were brought out they would have no experience, and the five years' service would practically be a probationary period. He himself had come out at the age of twenty-four on a five years' covenant and was brought on to the permanent cadre at the end of the term with the loss of one year's service in reckoning for seniority in the Department.

72,181. (Mr. Abdur Rahim.) He would not fix a maximum of Indians for the Imperial Service but would confine that service to officers recruited in England.

72,182. The question of paying indigenous labour the same rates as imported labour was an economical one for the Government to consider. The Association had not put forward any suggestions on the subject. Personally he believed that a man working in his own country should not be paid the same as a man who came in from abroad. It was necessary to offer sufficient terms to attract men to India, but whether those terms should be higher than those paid to Indians was a matter for the Government to settle. If a man came out on a certain contract, and understood the terms of the contract, he had no reason to grumble so long as the contract was fulfilled. He did not think the terms offered to Imperial officers at present would continue to attract the right stamp of men in the future. The past history of the department showed that Government had gradually to offer better terms in order to obtain the class of men they wanted. For example in the early history of Cooper's Hill it was found that the terms were not quite so good as they appeared from the college prospectus and on protest being made to the Secretary of State the pay was revised.

72,183. The abolition of the distinction of Imperial and Provincial would go a great way to remove the existing discontent, but the difference of pay was also a grievance. Personally he did not think the local recruit ought to expect the same pay as the recruit from England, but he had not discussed the matter with men in the Provincial Service and the Association had not taken up the question.

72,184. (Mr. Madge.) There was no recognised system in England by which men could obtain a practical training; they obtained it where they could. A great deal depended on the place and the officers under whom the candidate was trained and possibly that accounted to a large extent for the difference of opinion as to the value of a training in India or a training in England.

72,185. The general opinion of the men in the Imperial Service was that the Provincial Service men were not up to the same standard as the Imperial Service, but it was difficult to prove anything from actual facts.

72,186. It was felt by the Association that it would be advisable that Royal Engineers should join the department early in their service. The Royal Engineer came into the Public Works Department because he received improved pay, and he did not think it would be fair to the Royal Engineer to bring him in at a time when his pay corresponded to the pay of the lowest grade in the Public Works Department.*

* The witness afterwards wrote: "I find my reply was not quite accurate and the following comparative table which has been prepared by Captain Holme, R.E., Under Secretary, Buildings and Roads, Punjab, may be of use.

The last column gives the pay (including exchange compensation allowance) of a Royal Engineer officer in the Military Works Service, while the previous column gives the corresponding pay in the Public Works Department.

The starting pay shown for the Military Works Service is the pay drawn 2½ years after the date of first commission. The pay is shown in rupees per month:—

Service in P. W. D.	P. W. D.	M. W. S.
1st year	384	442
2nd "	420	442
3rd "	460	442
4th "	500	442
5th "	540	442 + 548 = 495
6th "	580	518
7th "	620	518
8th "	660	518
9th "	700	548 + 780 = 662
10th "	750	780
11th "	800	780

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72,187. A five year contract system was not practicable as a recruiting base for the department. Old experienced men would not be amenable to the rules of the department, and would probably cause discontent. Another objection was that the men would come in on higher pay.

72,188. (Mr. Fisher.) At present officers could not obtain study leave, but a man of less than 12 years' service could obtain permission when on furlough to inspect definite works, about which he had to submit a note, and if that note was considered satisfactory his railway fare was paid. That was quite inadequate. The Association felt there ought to be something on the lines of the facilities offered to the Indian Medical Service.

72,189. (Mr. Sly.) The fifty-five years' rule for retirement was originally introduced to accelerate promotion in the department when there was a block. Now another block seemed inevitable but apart from this there were no special conditions in the Public Works Department which made it necessary that the rule should be retained.

72,190. According to the present prospectus sent to candidates a man had a reasonable expectation of reaching the executive grade after a certain period of service, and if he failed to do so through no fault of his own the fault must lie with erratic recruitment on the part of the Government. It was true there was a specific statement in a footnote that an officer would not rise above Rs. 800, in the ordinary course, but that required to be made much more clear, because read in conjunction with the paragraph in the prospectus itself the meaning was open to doubt.

72,191. The Association felt that the expense of living of a Public Works officer was just as heavy as that of an Indian Civil Service officer, and also that the Public Works officer's education was equally expensive. The better pay of the Indian Civil Service and the plums in that service were necessary to attract the best brains to the premier service and to enable the officers to keep up their position in India but taking everything into consideration officers of the Public Works Department were entitled on retirement to an equal pension in so far as this was contributed by Government.

72,192. The claims put forward in the written statement in regard to privilege leave involved an alteration of the principle on which privilege leave was granted, but at the same time there was the question of whether a man who had earned his privilege leave was not entitled to it. He himself at present was entitled to three months' privilege leave but saw no chance of getting it. The suggestion put forward by the Association provided an economical remedy as against the more logical method of an increased cadre. The claim for the allowance of privilege leave prior to retirement was also, he admitted, opposed to the principle on which privilege leave was granted.

72,193. If a family pension fund was established there would not be the same need for the provident fund as at present.

72,194. The question of private practice on the part of officers had never come prominently before the Association, but it was felt that during leave it would be advantageous to allow an officer to take private practice, not with the idea of his making any considerable profit, but with the idea of his obtaining experience in English methods. Private practice during service in India was negligible.

72,195. (Mr. Chaulab.) 75 per cent. of the Indians in the Imperial Service were members of the Association, and presumably the memorandum had been seen by them, as a copy was supposed to have been sent to every member. He could not say whether it had been approved by the Indian members, but it had been given to him as the official memorandum of the Association. The memorandum was drawn up by a committee formed of officers stationed in Simla but no Indian member was on the committee. No general meeting was called, as it was impossible to have a meeting of such a large number of members from all over India.

72,196. (Sir Theodore Morison.) He did not think there had been any reduction of maximum invalid

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pension and the statements in the memorandum on this point required some modification. His own impression was that subsequent to the introduction of the chapter in the pension code to which Civil Service Regulations 641 now corresponded the paragraph (now Civil Service Regulation 474) regarding the allowances of the other uncovenanted services had been revised. The relative figures given in the memorandum were, however, correct. The complaint really was that the

regulation fixing the maximum pensions of the uncovenanted services had been revised (*vide* Finance Department order No. 414, dated 25th January, 1888), and no corresponding revision had been made at the same time in the invalid pension rules of the Imperial Engineers, though it had been ruled that the latter were entitled to special treatment, and better pension rules than those governing the services formerly classed as uncovenanted.

(The witness withdrew.)

At Madras, Wednesday, 28th January, 1914.

PRESENT :

THE RIGHT HON. THE LORD ISLINGTON, G.C.M.G., D.S.O. (Chairman).

THE EARL OF RONALDSHAY, M.P.

SIR MURRAY HAMMICK, K.C.S.I., C.I.E.

SIR THEODORE MORISON, K.C.I.E.

SIR VALENTINE CHIROL.

MAHADEV BHASKAR CHAUBAL, Esq., C.S.I.

ABDUR RAHIM, Esq.

WALTER CULLEY MADGE, Esq., C.I.E.

FRANK GEORGE SLY, Esq., C.S.I.

HERBERT ALBERT LAURENS FISHER, Esq.

And the following Assistant Commissioners:—

S. D. PEARS, Esq., Acting Secretary to Government, Public Works Department, Madras.

S. BHASKARA AYYAR, Esq., Executive Engineer, Madras.

R. R. SCOTT, Esq. (Joint Secretary).

COLONEL W. M. ELLIS, R.E., Chief Engineer, Madras.

Written Statement relating to the Public Works Department.

72,197. (I.) Methods of recruitment.

IMPERIAL SERVICE.

Present Regulations.—This service is recruited from selected candidates appointed in England by the Secretary of State for India in Council. The selection of candidates in England is made on the advice of a Selection Committee including at least one eminent representative of the Engineering profession. Natives of India who are British subjects are eligible for appointments to this service and are selected to the extent of 10 per cent. of the total number of Assistant Engineers thus recruited, if otherwise duly qualified, viz., by age, examination, &c.

Remarks.—Generally the method of selecting the Imperial Engineers is satisfactory. It is considered that one member of the committee should be an Engineer who has served in India as a Chief Engineer in the Public Works Department.

One member of the committee should be a retired member of the Indian Civil Service.

It is also considered that the 10 per cent. proportion of Indians who are now selected in England by the committee should be selected in India by the Local Government and that the field of selection should include all qualified men up to the age of 30 years and embrace men already serving in the Provincial or Subordinate establishment. It is believed that by such a system more efficient Engineers could be secured.

In regard to the matter of appointment of Indian Engineers it is believed that the locally-bred and trained men are likely to be more efficient than men belonging to other provinces or trained in England. Generally speaking, local men are likely to be professionally and administratively the equals of Indians appointed in England, while they have the advantages of being in close touch with the language, customs and mode of life of the local Indian population. This is frequently not the case with the Indian appointed in England. I am of opinion, speaking generally and as regards average, that the Indian Engineer is inferior to English Engineers, i.e., in ability to apply in practice his theoretical knowledge and training and in practical self-reliance and resource and energy.

If a local man, he, however, possesses the advantage of closer touch and knowledge of the people and this is frequently a considerable asset. In the case of the Indian appointed in England, this advantage is frequently lost, while the disadvantages remain. I am of opinion that the best method of appointing Indians to the Imperial Service is by the selection periodically from among the Provincial Service Engineers for transfer to the more highly-paid service, and not by direct appointment either in England or in India.

PROVINCIAL SERVICE.

Present Regulations.—This service is recruited—

(1) From the students of the College of Engineering, Madras, being natives of India as defined in the Statute 33 Vict., Chapter 3, Section 6, at the rate of one every year, and

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[Continued.]

(2) From the Upper Subordinates of the Department at the rate of one in alternate years. The recruitment for the College is made annually by the Chief Engineer, Public Works Department, in consultation with the Principal of the College and the appointment is conferred on the student, either Civil or Mechanical Engineer, judged most suitable on the results of the examination and the promises shown by him and his general behaviour during the College course.

Remarks.—It would be an advantage if the selection of an Engineer direct from the College of Engineering, Madras, for appointment to the Public Works Department could be improved on. It is by no means a foregone conclusion that the man who is top of the year will prove the most efficient practical Engineer.

It is considered reasonable to guarantee the number of appointments to Indian Engineering graduates, but the selection under existing conditions in practice is confined to two—the first Civil and first Mechanical Engineer student in order of passing out from the College. It has been suggested that selection from among the passed Engineers after two years' service in the Department as Section and Sub-Division Officer would result in getting the best men with much more certainty than the present method. Such a system is, however, open to the objection that it entails employment of several inexperienced men in positions of responsibility with a view of seeing which was best suited for such a position. From this both Government work and the interest of the unsuccessful men are likely to suffer. This objection is so grave a one as to render the suggested reform of doubtful value. In the interests of Government more efficient men would be obtained by giving the yearly post now given yearly to a selected passed Engineer student from the College to any passed Engineer graduate of the Madras College under the age of, say, 30 years. This would secure a wider field for selection among proved and tried men, but would naturally be unpopular with College students.

The system of recruitment of the Provincial Service from Upper Subordinates of the Department is quite satisfactory.

72,198. (II.) Systems of training and probation.

IMPERIAL SERVICE.

Present Regulations.—Candidates who had passed through a College course and obtained one of the degrees prescribed should have had at least one year's practical experience in Civil Engineering under a qualified Civil Engineer at the time when they appear before a Selection Committee. Those who have taken no College course should have had a full three years of such practical experience. In the event of any candidate being selected who has not, in the opinion of the Selection Committee, had sufficient practical experience, he may be required to undergo, after arrival in India, a year's probation in charge of works and his final appointment is made dependent upon the result of such probation.

Remarks.—It is considered that both Imperial Engineers appointed in England and Provincial Engineers appointed direct from the Madras College of Engineering should be on probation for a period of two years after appointment. The apprentice period of one year for Provincial Engineers to be in addition to this. This may be considered as taking the place of the practical training required of English-appointed men before appointment. In cases of doubt, extension of the period of probation by not more than one year should be permissible. At the end of the period of probation the engagement should be terminable by either party. The termination of either-party of the engagement should, in the case of Engineers appointed in England, carry with it title to a free passage to England.

PROVINCIAL SERVICE.

Present Regulations.—Students recruited from the College of Engineering, Madras, are appointed by the Local Government as apprentices on Rs. 100 a month. They are promoted to Rs. 150 after six months' period, provided they have given satisfaction during that period and to Assistant Engineer on Rs. 250, Provincial Service, after a year provided they are

then considered to be in all respects competent to hold charge of a sub-division. In the case of an apprentice who at the end of the first year's service is not considered qualified for confirmation in the department, the Local Government may decide whether he is to be given a further trial or be removed from the Department; and ordinarily one who is not within three years from date of appointment as apprentice Engineer recommended for promotion to Assistant Engineer will be so removed.

72,199. (III.) Conditions of service.

Present Regulations.—Under Article 649, Civil Service Regulations, any Civil Engineer of the Public Works Department who, on reaching the age of 50 years, has not attained the rank of Superintending Engineer will be liable to be called upon to retire.

Under Article 650 of the Civil Service Regulations, all Civil Engineers of the Public Works Department are required to retire on attaining the age of 55 years.

The same rules apply to Military officers also—*vide* Articles 615 and 616, Civil Service Regulations.

This heading is too vague to give any more information on the subject.

Remarks.—The alteration suggested in the way of extended probationary period on first appointment has already been made. It is, however, too much to expect that such an extended period of probation will have the effect of excluding inefficient from the department and under the existing conditions of service the matter of getting rid of an inefficient officer either Imperial or Provincial is one involving great difficulties.

This is especially so when the period served is such as not to entitle the officer to a pension. In every department there are a few inefficient in the position of superior officers and the Public Works Department is no exception. There are Assistant Engineers who are considered unfit for executive charges of divisions and who it may be added are bad Sub-Division Officers as well.

It is open to Government to reduce such servants or refuse to promote them, but this does not meet the case—reduction or non-promotion will not produce efficient work and is indeed likely to result in still more inefficient performance of duties on the part of a man who has lost all prospect of advancement. It is obviously in the interests of Government to dispense with the services of men who prove unprofitable public servants, while in the case of the junior men, in such a case, it is probably also in the interests of the men themselves. Under existing circumstances, in the absence of gross misconduct or default, there is no regular method of getting rid of an inefficient. It is essential that an officer of the Public Works Department who is considered unfit for charge of an executive division after sufficient service as Assistant Engineer in charge of sub-divisions (say six years) should be got rid of.

It is desirable that Government should treat with generosity men whose services are dispensed with for general inefficiency; in some cases the fault does not lie with want of effort on the part of men themselves, and indeed while the most deserving, these are the most hopeless cases of all. It is to be considered that in unwittingly appointing such men there has been an error of judgment on the part of the appointing authority and such things must be paid for. It is recommended, therefore, that special powers to compulsorily dispense with the services of all officers at suitable notice (say one year) for general inefficiency as shown by their record of service be a part of the "conditions of service" but that officers whose services are so compulsorily terminated be given double gratuities if dispensed with before a pension is earned or in the case of pensions some increase to pension where the services are dispensed with at less service than 20 years.

No increases are to be allowed in the case of an officer whose services are dispensed with on account of specific gross fault.

There may be some difference of opinion as regards the giving special extra gratuities to special inefficient officers, but there can be little doubt as to the desirability of holding the power to get rid of a useless man and the necessity for this is pressed on the attention of the Royal Commission.

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72,200. (IV.) Conditions of salary.
The rates of pay and allowances in force in 1890 and 1900 and at the present time are:—

IMPERIAL SERVICE.			
	Rates of pay.		At the present time.
	In 1890.	In 1900.	
Chief Engineers—			
First class...	Rs. 2,500	2,500	2,750
Second „ ...	2,000	2,000	2,500
Third „ ...	1,800	1,800	Abolished.
Superintending Engineers—			
First class...	1,600	1,600	2,000
Second „ ...	1,350	1,350	1,750
Third „ ...	1,100	1,100	1,500
Executive Engineers—			
First grade „ ...	950	1,000	Rs. 800—50—1,250, the increment of Rs. 50 being given annually for approved service.
Second „ ...	800	850	
Third „ ...	700	700	
Fourth „ ...	600	Abolished.	
Assistant Engineers—			
First grade „ ...	500	550	Rs. 380—30—700—50—750, the increment of Rs. 40 being given annually for approved service until Rs. 700 is reached, the next increment being Rs. 50 a month.
Second „ ...	*350	450	
Third „ ...	250	350	

* Assistant Engineers, second grade, after three years' service in the grade, received Rs. 400 a month if recommended.

Remarks.—While as regards salary generally for both services it is considered that officers are adequately paid, there is as regards Madras an exception in the case of the Chief Engineers' grade and this is especially so when one has regard to the scale of pay of the Superintending and Executive Engineer officers.

The Chief Engineers of the Madras Public Works Department are put to considerable extra expense in moving with the Government and upkeep of houses both at Madras and Ootacamund which the position they occupy entails on them and especially on the officer who is head of the Department considerable unavoidable extra expenditure.

The responsibilities of the posts are great—much greater than those of Superintending Engineers—while the actual work is more arduous and more harassing. This is more specially so as regards the head of the department who has the dealing with all establishment questions in addition to his administrative professional duties. This officer draws Rs. 250 a month more than the second-class Chief Engineer, but his extra responsibilities and work are much more onerous and the difference of salary an altogether inadequate recognition of these.

PROVINCIAL SERVICE.

	Rates of pay.		At the present time.
	In 1890.	In 1900.	
Chief Engineers—			
First class ...	Rs. 2,500	2,500	2,750
Second „ ...	2,000	2,000	2,500
Third „ ...	1,800	1,800	Abolished.
Superintending Engineers—			
First class ...	There were not two separate services—Imperial and Provincial—in 1890. The Engineers appointed in England and in India were borne on the same list and were drawing the same rate of pay which is shown under Imperial Service for 1890.	1,050	1,000
Second „ ...		900	1,400
Third „ ...		750	1,200
Executive Engineers—			
First grade „ ...		650	Rs. 535—35—850,* the increment of Rs. 35 a month being granted annually for approved service.
Second „ ...		550	
Third „ ...		475	
Fourth „ ...		Abolished.	
Assistant Engineers—			
First grade „ ...		400	Rs. 250—25—675, the increment of Rs. 25 a month being granted annually for approved service.
Second „ ...		350	
Third „ ...		250	

* A special increment of Rs. 50 may be granted by the Local Government to a deserving Executive Engineer who after completion of five years' service on the maximum pay of Rs. 850, is not promoted to administrative rank.

Remarks.—The salaries of the Provincial Service are considered adequate and suitable.

72,201. (V.) Conditions of leave.

Imperial Service.

Present Regulations.—The following is a summary of the principal regulations to the leave admissible to Engineers appointed to the Imperial Service by the Secretary of State from the United Kingdom:—

Short leave.—Privilege leave may be granted to the extent of one-eleventh part of the time that an officer has been on duty without interruption; and it may be accumulated up to three months, earned by 33 months' duty. During privilege leave the officer retains a lien on his appointment and receives an allowance equal to the salary which he would receive if he were on duty in the appointment on which he has a lien. An interval of six months must elapse between two periods of absence on privilege leave.

Privilege leave may be prefixed to furlough, special leave or extraordinary leave without allowance. The whole period of leave thus taken in combination is known as combined leave. Combined leave cannot be granted for a shorter period than six months, nor, except on medical certificate, may be extended beyond two years.

Extraordinary leave without allowances may be granted in case of necessity and, except in certain specified cases, only when no other kind of leave is by rule admissible. It may be granted in continuation of other leave.

Subsidiary leave in India for a minimum of ten days, usually with half average salary, may be granted to an officer proceeding on or returning from leave out of India or on retirement, to enable him to reach the port of embarkation or to re-join his appointment. It is admissible only at the end and not at the beginning of combined leave.

Short leave is also granted to enable officers to appear at examinations, etc.

Long leave.—Furlough and special leave with allowances are admissible to an aggregate maximum amount of six years during an officer's service. The amount of furlough "earned" is one-quarter of an officer's active service and the amount "due" is that amount less any enjoyed.

Furlough without medical certificate can, if due, be generally taken after eight years' active service and again after intervals of not less than three years' continuous service. It is limited to two years at a time. After return from privilege leave of more than six weeks, furlough cannot be taken for 18 months.

Furlough on medical certificate may be granted (a) to an officer who has rendered three years' continuous service for not more than two years but capable of extension up to three years and (b) to an officer who has not rendered three years' continuous service up to one year in any case, and up to such longer period, if any (but not exceeding two years), as the officer may have furlough due to him.

The allowances admissible during furlough are—

(1) During the first two years of furlough without medical certificate and during so much of furlough with medical certificate as may be "due," half average salary subject to certain maximum limits.

(2) After the expiration of the period for which the foregoing allowances are admissible, one-quarter of average salary subject to certain maximum and minimum limits.

Special leave may be granted at any time for not more than six months with intervals of six years' service; allowances calculated as during furlough are given during the first six months only whether taken in one or more instalments.

General rules.—Leave of absence, whether on furlough or on privilege leave, can never be claimed as of right, and is given or refused at the discretion of Government.

After five years' continuous absence from India an officer is considered to be out of the employment of Government.

When leave allowances other than privilege leave pay are paid at the Home Treasury, or in a Colony where the standard of currency is gold, rupees are converted into sterling at the rate of exchange fixed for the time being for the adjustment of financial

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transactions between the Imperial and Indian Treasuries unless any other rate has been exceptionally authorized. But for the present the rate of conversion is subject to a minimum of 1s. 6d. to the rupee. [Privilege leave pay when issued from the Home Treasury (this is only admissible when privilege leave is combined with other leave) is converted at 1s. 4d. to the rupee.]

Remarks.—It is considered that the leave rules are too complicated and require revision. It appears unnecessary to restrict the amount of privilege leave accumulated to three months, and this specially operates as a hardship in the case of officers whose services cannot, in the interests of the public service, be spared and who continue to serve without leave after they have earned three months' privilege leave.

It is frequently the case that officers, especially married officers, with families to educate in England, cannot afford to take furlough entailing as it does half salary, and it is recommended that officers should be allowed to take furlough on full pay, the same being counted against them as if double the period on half pay. This should be subject to a proviso that not more than two-thirds of the total furlough at credit of an officer should be taken on full pay and further the total period on full pay in any one absence might be limited to one year.

The limit requiring active service for eight years before being eligible for the first furlough should be reduced to five years.

PROVINCIAL SERVICE.

Present Regulations.—The privilege leave rules are the same as those for Imperial officers.

The long leave rules applicable to Provincial officers are those given in Chapter XIV of the Civil Service Regulations. Briefly these are:—

Leave on medical certificate may be granted for three years in all but not for more than two years at one time, and no officer can have leave on medical certificate out of India more than twice.

After six years' service, leave on private affairs for six months may be granted to an officer who has not had furlough and reported after intervals of six years:—

(a) After ten years' service, furlough for one year or any less period; and thereafter, at intervals of not less than eight years, one year or such other period as together with all periods already spent on furlough may not exceed two years, or

(b) After eighteen years' service, furlough for two years or any less period; and thereafter, at intervals of not less than eight years, any such period as together with all periods already spent on furlough may not exceed two years. Provided—

(i) That the service for furlough of an officer who has had leave on private affairs counts only from the date of his last return from such leave;

(ii) That the aggregate amount of furlough or of furlough and leave on private affairs taken together shall not exceed two years;

(iii) That an interval of not less than eighteen months has elapsed between last return from privilege leave of over six weeks' duration, whether taken by itself or combined with leave on medical certificate, and the furlough, or privilege leave, if any, with which the furlough is combined.

Extraordinary leave without allowances may, in case of necessity and when no other leave is by rule admissible, be granted for such time as may be necessary—

(a) An officer on leave on medical certificate is entitled to half his average salary for the first fifteen months of each period of such leave but not for more than thirty months in all. For the rest of his leave he is entitled to a quarter of his average salary.

(b) An officer on furlough or on leave on private affairs is entitled to half his average salary.

Half average salary and quarter average salary are subject to certain maximum and minimum limits.

Remarks.—The rules should be modified in the same respects as those recommended for Imperial services as regards privilege leave. As regards restrictions on interval between periods of furlough, it is considered the first furlough should be admissible after five years' active service and further furlough subject to an

interval of four years. The total furlough admissible should be one-eighth of the active service subject to a maximum of four years in the total service. The privilege of converting furlough for half the period on full pay recommended for Imperial Engineers is recommended only when the furlough is spent in Europe.

72,202. (VI.) Conditions of pension.

IMPERIAL SERVICE.

Present Regulations.—The following is a summary of the principal pension rules applicable to Engineers appointed to the Imperial Service by the Secretary of State from the United Kingdom:—

An officer is eligible for a pension on voluntary retirement after completing 20 years' qualifying service or attaining the age of 55 years. If at an earlier date he is compelled to retire from the service through ill-health not occasioned by irregular or intemperate habits, he becomes eligible for an invalid pension or a gratuity according to the length of his service.

The amount of pension or gratuity is regulated as follows:—

After a service of less than ten years, an invalid gratuity not exceeding one month's emoluments for each completed year of service.

After a service of not less than ten years an invalid pension not exceeding the following amounts:—

Scale of pension.

Years of completed service.	Sixtieths of average emoluments.	Maximum limit of pension.
10	20	Rs. 1,000 a year or Rs. 53½ a month.
11	21	Rs. 1,400 a year or Rs. 116½ a month.
12	22	Rs. 1,800 a year or Rs. 150 a month.
13	23	Rs. 2,200 a year or Rs. 183½ a month.
14	24	Rs. 2,600 a year or Rs. 216½ a month.
15	25	Rs. 3,000 a year or Rs. 250 a month.
16	26	
17	27	
18	28	
19	29	

After a service of not less than twenty years, a retiring pension not exceeding the following amounts:—

Scale of pension.

Years of completed service.	Sixtieths of average emoluments.	Maximum limit of pension.
20 to 24	30	Rs. 4,000 a year or Rs. 333½ a month.
25 and above	30	Rs. 5,000 a year or Rs. 416½ a month.

Officers who have shown special energy and efficiency during an effective service of three years in certain appointments may, at the discretion of the Government of India, be allowed an additional pension of Rs. 1,000 a year, subject to the condition that the officer must not retire voluntarily before the completion of a total qualifying service of 28 years.

Subject to certain prescribed conditions, rupee pensions are now issued at the rate of exchange of 1s. 9d. the rupee to pensioners residing in countries in which the Indian Government rupee is not legal tender.

Remarks.—I consider the rates of pay now allowed to Imperial Engineers adequate, but some improvement in the pension is urgently called for.

The standard of living and the cost of necessities both in England and in India has greatly increased in the past 30 years and this has been recognized and suitable increases of salary have been given.

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In the matter of pension, actual reduction owing to the fall of the exchange value of the rupee has been sustained. I consider that pensions should be raised to a standard approaching those given to Military officers of the Indian Army and Royal Engineers who have served continuously in India. It is considered that the ordinary pensions of officers should be raised to £300 sterling after 20 years' service and to £600 after 30 years.

Extra pensions of £100 a year should be given for approved service as a Superintending Engineer for three years and an additional £30 for each year's service as a Chief Engineer subject to a maximum of £150.

PROVINCIAL SERVICE.

Present Regulations.—An officer is eligible for a pension on voluntary retirement after completing thirty years' qualifying service or on attaining the age of 55 years—*vide* articles 464 and 465, Civil Service Regulations. If at an earlier date he is compelled to retire from the service through ill-health not occasioned by irregular or intemperate habits, he becomes eligible for an invalid pension or a gratuity according to the length of his service.

The amount of pension or gratuity is regulated as follows:—

(a) After a service of less than ten years a gratuity not exceeding (except in special cases and under the orders of the Government of India) one month's emoluments for such completed year of service. If the emoluments of the officer have been reduced during the last three years of his service, otherwise than as a penalty, average emoluments may, at the discretion of the local Government, be substituted for emoluments.

(b) After a service of not less than ten years, a pension not exceeding the following amounts:—

Years of completed service.	Scale of pension (60th of average emoluments) of last three years.	Maximum limit of pension a year.
10	10	Rs. 2,000
11	11	2,200
12	12	2,400
13	13	2,600
14	14	2,800
15	15	3,000
16	16	3,200
17	17	3,400
18	18	3,600
19	19	3,800
20	20	4,000
21	21	4,200
22	22	4,400
23	23	4,600
24	24	4,800
25 and above	30	5,000

Remarks.—It is considered that the period of service to qualify for voluntary retirement on pension should be reduced to twenty-five years.

The maximum limit of pension should be as at present up to twenty-five years' service, but should be raised at the rate of Rs. 200 per year up to thirty years. The final maximum will then stand at Rs. 6,000.

72,203. (VII.) Limitations on the employment of non-Europeans and the working of existing system of division of services.

Present Regulations.—The employment of non-Europeans (Statutory Natives of India) is restricted

to the appointments made in India and 10 per cent. of those made in England.

The working of the existing system has not caused any difficulty.

Remarks.—It is considered that the appointment of Indians in England is inadvisable for the reasons already given above under the heading (I).

Appointments in England should be limited to Europeans.

The existing system of division of services into Imperial and Provincial is a logical one and has worked well.

72,204. (VIII.) The relations of the Public Works Department with the Indian Civil Service and other departments.

—The relations with the Indian Civil Service and other services are good. There is generally little friction and it is not considered that alterations are called for in this respect.

72,205. (IX.) Other points within the terms of reference not covered by the above heads.

Travelling allowances.—These have not been raised for very many years and are frequently inadequate to cover out of pocket expenses. Generally it may be said an officer is out of pocket when travelling by road for every day on which he moves. Those officers who move slowly halting several days at each camp, recoup their losses on the move by gains on the halting allowances. Officers whose duties require constant moving in camp receive inadequate allowances. When it is considered that the cost of carts and forage has risen over 50 per cent. since the allowances were fixed, it is not surprising that such a result ensues. The daily allowances for the days when an officer moves his camp should be increased. The rules further require some revision to suit the more modern mode of travelling—the bicycle, the motor car, etc.

Officers in this Presidency in the Public Works Department generally feel they are unjustly treated in the matter of carrying horses and camp equipment by rail on Government service.

The readings of the rules on this subject (Civil Service Regulations, article 1000) are generally opposed to considerations of justice or common sense and on plea of protecting the public purse—the grossest injustice is occasionally done to officers.

Cases of hardship in regard to conveyance of horses, etc., most frequently occur in connection with transfers, but I have known also cases of intolerable injustice in causing officers to carry their horses by rail when taking them about in the execution of their ordinary duties.

It is considered that officers on transfer should be allowed actual expenses incurred up to some fixed limit for each grade.

For District officers on tour the provisions of Civil Service Regulations, article 1062, may be made to apply. This gives the option of claiming actual expenses for the first journey out of and back to headquarters.

Inspection of engineering works in Europe.—Greater facilities for seeing works in Europe by officers on leave should be given. The suggestion that a party tour should be organized each summer by the India Office for Engineer officers on leave to visit engineering works in progress in England is supported. Adequate allowances for personal expenses on such tours should be given to officers accompanying them. The time spent on tour should generally count as part of the furlough.

called and examined.

amongst selected candidates. The present qualifications of the recruits were adequate.

72,208. Imperial engineers should be on probation in India for a period of two years, not so much with a view to training as with a view to enabling the local officers to judge of their suitability. It was desirable that a man should have some practical experience of works, but it did not make much difference whether that experience was gained in

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England or in India; in fact if works were available at the time there would be certain advantages in India.

72,209. He favoured the existing system of division into Imperial and Provincial but would do away with the present rule under which 10 per cent. of Indians were recruited in England. Recruitment in India would give a better selection of men who were in touch with prevailing conditions. He would leave it to the discretion of the local governments to select men from the provincial or subordinate services, but there would be no objection to leaving the posts open to the whole profession whether in Government or any other service. He had sent in the written statement under the impression that it was his business to put forward views which would be acceptable to Government but discovered later that it was his own personal views which the Commission required. His own opinion was that there was no necessity for the 10 per cent. and that Government could get better value for their money by appointing the English engineer in England and the Indian engineer in India.

72,210. There appeared to be a certain amount of dissatisfaction amongst provincial officers with the designation provincial and he would favour the removal of any form of nomenclature which might create invidious distinctions. Officers doing the same work should be in the same service, but he held to the principle that a European recruited officer should have a compensation allowance over and above the ordinary pay of the service.

72,211. He was the only Royal Engineer in the service at the present time and none were being recruited to the department.

72,212. He had not considered the question of a central college but saw no great objection to it. The engineering training at the Madras college was adequate. He did not lay much stress upon the actual detail of the courses at engineering schools; if a man was going to make a good engineer he would benefit by the course at any engineering college provided it attained a fair standard. The difference between two men of equal capacity after ten years would not be very great if one went to a rather inferior school and the other to a somewhat superior school. He agreed, however, that the better the school the better a man was likely to be, and he desired to see the Indian given an opportunity of a standard equal to that of the engineering colleges in England.

72,213. A recruit joining the upper subordinate service was given a year's practical training when he came out of the college and did not get an appointment till some time after that. The upper subordinate officer was working satisfactorily.

72,214. Temporary Engineers had been working in the service for the last seven or eight years, and some of them were doing permanent work in connection with irrigation, roads and buildings. All kinds of work were included in the duties of an executive engineer, the only officer allocated to a separate branch being the Chief Engineer for Irrigation. It did not pay where works were scattered to have officers for different classes of work. The subordinate officer had to take any work that might occur within his charge. For buildings and roads, he took his orders from the officer in charge of buildings and roads, and for irrigation from the irrigation officer. Temporary engineers at present were in a very poor position in regard to prospects and he had a great deal of sympathy with them. Those who had been on permanent work for some years might be taken into the cadre of the service. In doing so age and standing would have to be considered and also due regard paid to the position of the officers in the service. A Temporary Engineer could not be put at the bottom of the list if he had any experience or length of service; on the other hand if he was brought on to the cadre at some point up the scale it would rouse a grievance amongst the officers.

72,215. It was very important that inefficient officers should be compulsorily retired. If Government now possessed that power it did not appear to use it. A man could be reduced but that did not meet the case as in his reduced capacity he continued to

do still more inferior work. A man retired for inefficiency should be treated generously; up to ten years he might be given a double gratuity and between ten and twenty some increase of pension. That was open to the objection that it would be treating him more generously than an invalided officer, and perhaps the proposal was not a good one; in any case Government should have the option of giving compensation. It was possible that a man might wish to leave the service and with malice aforethought might perform his work inefficiently, and therefore it was necessary that Government should have discretionary power.

72,216. Increased salary was necessary for officers in the grade of Chief Engineer. The difference between his pay and that of the Superintending Engineer was not commensurate with the extra responsibility of the post. The Chief Engineer now received Rs. 2,750 and Rs. 250 as Secretary to Government, and he should receive at least Rs. 500 more than the man below him. The Chief Engineer for Irrigation received Rs. 2,500 and Rs. 250 as Secretary to Government, so that the difference between the officers was Rs. 250, whereas the responsibility of the higher post was worth a great deal more than Rs. 250. The present salary of Rs. 3,000 could not be called a bad salary.

72,217. It would be an advantage to the service to separate the Assistant Engineer and Executive Engineer and have two time-scales, with selection from one grade to the other. A man's qualifications were always carefully considered before he was given charge of a division and if a man was not considered fit he was passed over. At present an officer had occasionally to wait in the Rs. 800 grade before he received executive rank, on account of there being no vacancy. If he had to wait for two years before being promoted he should take up his position in the time-scale allowing for the two years he had waited. It would be rather hard on an officer not to compensate him for being kept back through no fault of his own.

72,218. Very few officers took advantage of the privilege of optional retirement at twenty years, but the concession was very much valued. From the point of view of the service twenty years was rather short. If they had to choose between a larger pension and the retention of optional retirement after twenty years the majority would prefer a longer term of service and a larger pension.

72,219. He did not think that private contractors could do the work so cheaply as the Public Works Department. There were a few large engineering firms who were prepared to make designs and to act as engineering contractors, but the majority of contractors were only collectors of labour and practically looked for supervision to the engineering staff. The rates of tender of large firms for miscellaneous works were very much higher than the rates of the Public Works Department. In any case a certain number of engineers would have to be maintained by the department.

72,220. (Lord Ronaldshay.) He was not aware that the Government had the power of retiring inefficient officers but did not exercise the power because they had no discretion to award pensions to officers so retired.

72,221. There should be nothing derogatory to a locally recruited service, which performed the same work and was on the same list for promotion as the service recruited from England. An officer recruited in India would draw less pay and would be under different rules with regard to leave and pension. The only alterations he proposed were, first, to change the name of provincial service and secondly to stop recruitment of Indians in England.

72,222. (Sir Theodore Morison.) The periods of leave now allowed were liberal. An officer should, however, be allowed to commute his furlough into shorter periods on full pay within certain limits.

72,223. A pension of £600 should be payable to an Executive Engineer on retirement after a full period of service, and Superintending Engineers should be eligible for a pension of £700 and Chief Engineers for a pension running up to £850. That proposal was put forward in order to bring the pensions of Public Works Department officers into line with those

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of Royal Engineer officers, who received £700 no matter what their rank.

72,224. (Mr. Chabul.) He was against any form of competition and preferred the present method of selection. Any firm engaging an Engineer would do so by selection. It was true there was some difference between a system of recruitment for a recognized service and the occasional employment of an Engineer by a private firm, but the men obtained would be pretty much the same. Men might be brilliant in an examination and yet be inefficient, but the chances of obtaining such men were reduced by selection. It might be more satisfactory to the public to know that a man was being chosen on his merits by an examination, but his proposal was made rather with a view to efficiency than with the object of satisfying public feeling. He knew of instances in which candidates successful in examinations had proved failures, and had also known of failures amongst selected candidates, but the failures were fewer amongst the latter.

72,225. An Indian selected by the Secretary of State had generally lived in England about three or four years, and three years' absence at such a time of life rather put him out of close touch with the languages, customs, and mode of life of his own people. An Indian who was appointed in England might belong to the Punjab or the United Provinces and be posted to Madras, where he would be as much a stranger as a young Englishman. An Englishman had certain general advantages over an Indian and an Indian had certain general advantages over an Englishman. The Englishman was generally able to apply his theoretical knowledge in a more practical way, while the Indian was more in touch with the labour of the country, but by going to England he lost some touch with his own province, though no doubt he was more acquainted with it than the Englishman. It could not be said that an Englishman who served in India for twenty years lost touch with the manners and customs of the English people as he lived amongst his own people in India and spoke the same language. It might be of advantage to an Indian to be trained in the better institutions of England, and to live and move about for some years in western society, but the field of selection of such men would be extremely limited.

72,226. If a European officer received the pay that he would receive in his own country, plus 50 per cent. as a compensation allowance for serving in India he ought to be satisfied, but the question arose as to whether men could be obtained on such terms.

72,227. (Mr. Sly.) Important works were carried out generally by a system of petty contracts. As a rule large contractors were not forthcoming at reasonable rates. Large works had not been constructed in Madras for a great many years. In Madras town a single building as a rule would be taken up by a single contractor, but there was one in the town who was prepared to work on a large scale.

72,228. (Mr. Fisher.) The Indian Assistant Engineers generally received their engineering education in the presidency, their appointments being all made from the Madras college. Temporary Engineers might come from anywhere, and most of those now employed were educated outside the presidency. The facilities at the Government college were not sufficient to meet the demand for engineers. The output of subordinates was much below what was required and practically the department had to take anybody it could get. There had been a great increase in the demand for engineers and subordinates, especially the latter, by district boards and municipalities. Therefore a considerable extension was needed in the Madras college.

72,229. (Mr. Madge.) The period of probation he had recommended would practically mean that a man came out on an engagement and that at the end of that period was either kept on permanently or his engagement terminated. There was a good deal of difference of opinion as to whether such uncertainty of tenure would present the better class of engineers coming forward, but personally he believed that a man who had confidence in himself and who had a guarantee that a certain percentage of the men who came out would receive a permanent appointment would generally think he would be one of the permanent men. There should be power of dismissal at any period of a man's career. Cases were by no

means rare of a man who was quite good in his youth but became worthless later in life, and when a man was useless he should be got rid of whatever might be the cause. That might prejudice recruitment and that was why he had said that inefficient officers should be treated with great generosity and not be thrown on the world without provision.

72,230. He did not know whether promotions of Anglo-Indians had been made from the upper subordinate grades, but there had been several such promotions from the domiciled community. There were very few Anglo-Indians in the subordinate ranks of the department. On the average their work was much the same as that of other officers in the department. There was only one promotion by selection every two years.

72,231. (Mr. Abdur Rahim.) Indian trained officers were employed on construction to a very considerable extent, but no very large work had been done since the Periyar and Kuthikulya works many years ago, neither of which was in charge of provincial engineers, though provincial engineers and upper subordinates were employed on the works. Some of the Indian college trained men had done very excellent work indeed. The two works he had mentioned were built twenty years ago when there were fewer Indians in the service than there were now.

72,232. There had been a great deal of investigation work going on but that was quite different from the actual execution of works. Investigation work consisted in surveying and considering the lines on which projects ought to be drawn up and in making designs for large works, and he agreed with a statement made by a witness that in the investigation of some of the big projects in the Madras Presidency the Indian trained element was greatly in requisition and had to bear a very considerable share of the burden and responsibilities of the work. He also agreed that whatever was possible should be done to foster Indian engineering talent, but personally he did not think it would be to the advantage of the Government service that Indian college trained engineers should be employed in larger numbers in the Public Works Department. Whether it would be a matter of policy was another matter. Excluding the exceptional men, of which there were several brilliant examples in the department, the Indian did not make as good an engineer as the Englishman; he excelled in book work, but was not quite so good in the practical application of his learning. The best brains of the presidency went in for law where there were a great deal more openings than there were in engineering.

72,233. He was not prepared to say that the probationary training was everything it might be, in the case either of the European or of the Indian officer. They were sent to a division to learn their work, but the Executive Engineer as a rule had very heavy duties of his own and could not give a great deal of time to the training. He denied, however, that a difference was made as between European and Indian probationers. As a rule the probationers were not taken round with the Executive Engineer when he was on his tour. The training might be capable of improvement if officers were appointed to go about with the probationers and give them the teaching which the Executive Engineer had no time to give.

72,234. (Sir Valentine Chirol.) He would be prepared to admit a claim for higher pay by Indians serving in a different province from their own, as an Indian would not go to another province unless he did receive more pay. He agreed with a previous witness that a Bengali serving in Madras would be as much a foreigner in a foreign country as a European serving in Madras; but at the same time he would far rather have a Madrassi serving in Madras than a Bengali.

72,235. (Sir Murray Hammick.) Diaries of the probationers did not go to the Superintending Engineer through the Executive Engineers, but probationers as a rule were reported on quarterly or half-yearly to the Superintending Engineer who would send the reports on to the Chief Engineer, and if the Superintending Engineer was not satisfied with the training he would make a note on the reports accordingly.

72,236. (Mr. Pears.) He would not insist on students passing out of the college serving as upper subordinates in the Public Works Department in the

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interval between their passing out of the college and the occurrence of a vacancy.

72,237. In saying that the time scale was adequate he assumed that the condition of pension and leave would be improved. At present the salaries were not adequate to make up for deficiencies in pension.

72,238. He could not see any object in the restrictions now placed on the taking of privilege leave immediately before retirement. The rule involved Government in a certain amount of inconvenience, as it was rather apt to lead a man within a year of retiring to take any leave due to him in order not to lose it. If he was allowed to take it at the time he retired he would probably take it just before retiring and there would be no break in his service. There was also a certain amount of administrative inconvenience arising from the fact that a man on returning from privilege leave had sometimes to occupy a post for three months before he retired.

72,239. He objected to the rate of exchange for the rupee being 1s. 9d. for a man retiring in England and 1s. 4d. for a man living after retirement in India. When a man was paid out of Indian revenues he should not be penalized for settling down in the country.

72,240. The question whether a Temporary Engineer placed in a permanent post would cause a grievance amongst the permanent men superseded would depend on the place in which the officer was put. It he was put in somewhat below coevals he was not likely prejudicially to affect the men below him until it came to selection for administrative ranks.

72,241. There was not a great deal to choose between departmental work and contract work in regard to quality. Quality depended on the efficiency of the supervision of the engineer in charge.

(The witness withdrew.)

W. J. J. HOWLEY, Esq., Superintending Engineer, Madras.

Written Statement relating to the Public Works Department.

72,247. (I.) **Methods of recruitment.**—The present method of selection of Imperial Engineers by a Selection Committee in England is satisfactory, but it is suggested that at least 50 per cent. of the Selection Committee should be senior officers of the Public Works Department, either on the active or the retired lists.

72,248. (II.) **Systems of training and probation.**—*Probation.*—It is considered that there should be no period of probation after appointment. The opinion is that a period of probation after appointment would act as a deterrent preventing the best men from offering themselves; and, moreover, that it would be of very little use unless unduly prolonged. The Selection Committee should be in quite as good a position to decide as to a man's fitness for permanent appointment as his superior officers in India would be after a probation of say one year.

Training.—It is suggested that a recruit after appointment should have a year's practical experience on engineering works in the British Isles, instead of this being required as a condition of appointment. It should be ascertained to what Presidency and to what branch the new assistant would be posted, so that he might be sent to works where he would gain experience likely to be useful to him on joining his appointment. During this period of training the Assistant Engineer would be required to prove himself a competent horseman and to study the vernacular of his province (or such one of them as might be prescribed). His knowledge of the vernacular should be tested by examination during this practical course: the standard required need not be high.

72,249. (III.) **Conditions of service.**—It is suggested that the cadre of Permanent Engineers should be more frequently revised, and less dependence placed upon the employment of Temporary Engineers.

Much dissatisfaction has occasionally been caused by the transfer of Temporary Engineers to the permanent scale. It is suggested that future appointments of Temporary Engineers should be on the distinct understanding that no man so appointed shall under any circumstances be brought on to the permanent

72,242. He could not recall any instance in the presidency where an engineer had been kept waiting for a division owing to there being no vacancies.

72,243. Investigation of a project would involve a good deal of local inquiry from ryots as to rainfall, flood level, value of land, etc., and for such enquiries an Indian engineer would be specially suitable, but the advantage of the Indian officer would not be so great when it came to the execution of the project. For the execution of minor projects in Madras Indian engineers had been employed in certain cases.

72,244. (Mr. Bhaskara Ayyar.) Where projects had been worked out by Indian engineers he had no reason to doubt they had performed their work thoroughly well, but as he had only assumed charge of his present office recently he was not in a position to give an opinion. He was not prepared to say that Indian engineers had not shown energy and resourcefulness in their work.

72,245. If Indians were given the same charges as European engineers and were as efficient he had no objection to giving them any amount of pay, but he did not think it was necessary from the point of view of Government to pay a man above the reasonable market rate, and the market rate of an engineer in his own country was different from the market rate of the imported engineer. If there were men in the country able to do the work he did not object to their being largely employed, on the understanding that they were as efficient in every respect.

72,246. He would not exclude a member of the subordinate establishment from being appointed to the Imperial service if he was considered a good man. He would appoint the best available man in each vacancy as it occurred but would bar any man over thirty years of age.

scale. With regard to Temporary Engineers already serving, it is considered that the interests of men permanently appointed in the usual way should be fully safeguarded for promotion to administrative rank.

72,250. (IV.) **Conditions of salary.**—Although the scale of pay of the Public Works Department was revised and placed on an incremental basis in 1908, the Exchange Compensation Allowance formerly given was withdrawn and the net increase in actual emoluments is not commensurate with the greatly increased cost of living during the past decade.

Under the re-organisation scheme of 1908 it is ruled that an officer may not draw more than Rs. 800 per month unless he is in charge of a Division, or in a charge which the Local Government consider to be of equal importance. This rule is a hardship to an Officer who, though fully qualified, does not obtain a divisional charge simply because there is no vacancy for him. It is therefore suggested that an officer of the Imperial Service reported as fit for divisional charge should continue to receive the ordinary increments, irrespective of his being in actual divisional charge.

Under the reorganisation scheme of 1908, Executive Engineers attain their maximum pay of Rs. 1,250 per mensem after 19 years' service. It is urged that if an Executive Engineer, though otherwise qualified, is not promoted to a Circle charge after 20 years' service, he should continue to draw annual increments of Rs. 50 per mensem, subject to a maximum of Rs. 1,400 per mensem.

72,251. (V.) **Conditions of leave.**—The rules governing the grant of furlough to Imperial officers of the Public Works Department appointed in England are practically identical with those which apply to the Indian Civil Service and to Military Officers in Civil Employment; except as regards the amount of allowances. In the case of the two classes of officers just mentioned, furlough allowances are subject, if paid at the Home Treasury, to a minimum limit of £500 per annum, or the full amount of salary last drawn, whichever is less; and to a maximum limit of £1,000 per annum. On the other hand, for Civil Engineer officers of the Public Works Department, there is no minimum limit, while the maximum has

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been fixed at only £800 per annum. The following table shows the maximum furlough allowances permissible to Imperial Civil Engineers under the present rules:—

Years of completed service.	Maximum furlough pay. £
8	279
9	297
10	316½
11	337½
12	360
13	382½
14	405
15	427½
16	450
17	472½
18	495
19	517½
20	540
21	555
22	562½
After 3 years as Superintending Engineer, 3rd Grade	675
After 3 years as Superintending Engineer, 2nd Grade	787½
Thereafter	800

It is urged that Civil Engineer Officers on the Imperial list should not be subject to maximum and minimum limits of leave allowances different from those applicable to officers of the Indian Civil Service and to Military Officers subject to civil leave rules. A Royal Engineer in the Public Works Department, with 8 years' service to his credit, is entitled to almost double the furlough allowances of a Civil Engineer officer doing exactly the same class of work and having the same service in the Department. It is not till a Civil Engineer officer has completed 18 years' service that he can draw an allowance approaching that of a Royal Engineer officer after only 8 years' service. There is no valid reason why Civil Engineer officers should be so very much less favourably treated than their brother officers in the Royal Engineers. It is, however, not merely on the ground that other classes of Officers doing the same work draw much higher leave allowances that a claim is made for an increase in these allowances, but because the present furlough allowances are so inadequate that a large number of Civil Engineer officers cannot avail themselves of the furlough due to them, and which the state of their health demands that they should take. This question of improved leave allowances has already been raised in Memorials submitted by Civil Engineer officers to His Majesty's Secretary of State for India in 1912 and 1913.

Special leave.—It is suggested that the allowances paid during special leave should be the same as in the case of furlough.

Privilege leave.—Under the present rules privilege leave can be accumulated up to a period of three months only. It is a frequent occurrence that when an officer has accumulated the full period of privilege leave admissible (three months), the exigencies of the public service do not permit of his being allowed to take the leave, and in consequence his service ceases, for the time, to count for privilege leave. It is suggested that in order to avoid this loss of valuable leave on full pay, the period up to which it may be accumulated should be increased from three to six months.

An officer should be allowed to avail himself of privilege leave due to him immediately before retirement, and to retire from the Service at the end of his leave, instead of having first to return to duty, as is the case under existing rules. This concession would remove a legitimate grievance and would obviously tend to reduce administrative inconvenience.

The concession has already been applied to privilege leave when combined with any other form of leave and all that is asked for is its extension to privilege leave alone.

Study leave.—It is very desirable that officers of the Public Works Department should be allowed every opportunity of making themselves acquainted with modern developments in Engineering practice at Home and abroad. At present Civil Engineers can visit works in the British Isles and elsewhere only as private individuals and at their own expense, unless placed on deputation or specially permitted to visit certain works while on leave. In the latter case, certain travelling and other expenses are allowed, but the time spent in the visits counts against the officer's period of leave. It is suggested that officers should be allowed greater facilities for inspecting work outside India and should be encouraged to do so. In the Indian Medical Service, for example, an officer is allowed Study Leave in England up to one year out of total service, in addition to furlough. During this period he receives not only furlough pay, but also lodging allowance amounting to four to eight shillings per day.

72,252. (VI.) Conditions of pension.—The question of pensions is the greatest grievance of Civil officers of the Public Works Department. The amount of retiring pension admissible under the existing rules is totally inadequate and has formed the subject of numerous Memorials to the Government of India and to His Majesty's Secretary of State for India. Notwithstanding the great increase in the cost of living and the much higher qualifications now required from officers entering the Service, the present pensions are actually less than they were 40 years ago. Copies of the Memorials submitted by Civil officers of this Department during the past six years are attached as Appendices.* Although the first memorials were submitted in 1907, no reply thereto was furnished till August, 1912, when the petitioners were informed by the Government of India that no decision could be arrived at pending the receipt of the report of the Royal Commission on the Public Services in India. Civil Engineer officers, therefore, now look hopefully to the Royal Commission for redress of this long-standing grievance, and respectfully urge that the scale of pensions prayed for in the Memorials of 1912 and 1913* may be recommended.

In full confidence that the Royal Commission will realise the justice of these claims it is further urged that any improvements made in the scale of pensions should have retrospective effect, at least from the year 1908, seeing that the grievance was brought prominently to the notice of the Government of India in the Memorials of 1907-1908, to which no reply was vouchsafed, and that in the meantime many officers have been placed upon the retired list and many more will probably be retired before any decision is arrived at.

Invalid pensions.—Prior to 1884, invalid pensions granted to all officers belonging to the Uncovenanted Services, with which the Public Works Department was then classed, were governed by Article 474 of the Civil Service Regulations. In Lord Kimberley's Despatch of 1883, however, a new scale of pensions (known as the "more favourable" pension rules) was introduced for English-trained Engineers and Telegraph officers. Under this scale, which is governed by Article 641 of the Civil Service Regulations, the fixed maximum rate of invalid pension has been reduced, although the amount calculated on a percentage basis has been increased. The net result is that a Civil Engineer officer, if invalidated after 10, 11, 12, 13, 16, 17, 18 or 19 years, would draw a less pension than officers of other Services coming under Civil Service Regulations, Article 474, and drawing the same pay; while if invalidated after 14 or 15 years' service he would draw more pay. In order to remove this anomaly it is urged that the fixed maximum limits under Article 641 should be increased to at least the same as those fixed under Article 474.

* Vide Appendix XIII.

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The following comparative table will make clear the difference:—

Years of completed service.	C.S.R. Article 474.		C.S.R. Article 641.	
	Amount calculated on a percentage basis.	Fixed Maximum.	Amount calculated on a percentage basis.	Fixed Maximum.
10	10/60	Rs. 1,406	20/60	Rs. 2,813
11	11/60	1,650	21/60	3,150
12	12/60	1,920	22/60	3,520
13	13/60	2,210	23/60	3,910
14	14/60	2,520	24/60	4,320
15	15/60	2,850	25/60	4,750
16	16/60	3,200	26/60	5,200
17	17/60	3,570	27/60	5,670
18	18/60	3,960	28/60	6,160
19	19/60	4,370	29/60	6,670
20	20/60	4,800	30/60	7,200

Family Pension Fund.—Unlike the Indian Civil Service and the Military Services in India, there is no official Family Pension Fund for the Public Works Department. The emoluments of officers are not sufficient to admit of their making adequate provision for their families. Pension has been officially defined as "deferred remuneration," which means that part of an officer's salary is withheld as a contribution towards the cost of his pension. Now if an officer dies while still in the service, or shortly after retirement, the whole, or almost the whole of this "deferred remuneration" is lost and his family may be left utterly destitute. If, however, the officer had the option of investing with an Insurance Company, the amount assumed to have been retained by Government as his contribution towards his pension, he could so arrange that in the case of his death before the date from which the annuity would commence a considerable amount in cash or an annuity would be

payable to his widow or other member of his family dependent upon him. There is therefore a desire that some form of Family Pension Fund, applicable perhaps to other Services similarly unprotected as well as to the Public Works Department, should be introduced by Government.

72,253. (VII.) Such limitations as may exist in the employment of non-Europeans and the working of the existing system of division of services into Imperial and Provincial.—It is considered that if the present standard of efficiency in the Department is to be maintained, the European element must largely preponderate in the Imperial Branch for some considerable time. The number of appointments in the Imperial Service at present reserved for Indians is 10 per cent. and this proportion appears to be suitable for the present.

It is considered that Engineers recruited in England should receive a higher rate of pay than those recruited in India, whether all are included in one Service, as has been proposed, or in two distinct Services (Imperial and Provincial) as at present.

72,254. (VIII.) Relationship to the Indian Civil and other services.—The relationship between the Public Works Department and the Indian Civil and other Services in India is considered to be satisfactory.

72,255. (IX.) Other points within the terms of reference to the Royal Commission not covered by the preceding heads.—It is considered that some revision of the present Travelling Allowance Rules is necessary, especially with regard to transfers. At present a transfer is frequently a matter of very considerable expense to an officer. It is suggested that actual expenses, subject to reasonable limits, should be paid. It is also considered that Article 1000, Civil Service Regulations, as at present interpreted, imposes undue restrictions, especially in this Presidency, where the charges are very large.

Mr. W. J. J. HOWLEY called and examined.

72,256. (Chairman.) The witness represented the European Imperial Engineers of the Public Works Department, Madras. He had been in the service twenty-five years.

72,257. The present method of selection was generally satisfactory. It was considered by the officers he represented that a period of probation, after appointment, would deter the best men from applying for appointment. Personally he thought probation made for efficiency in the service. He did not regard the question, however, as one of special importance.

72,258. The ten per cent. limit of Indians should be maintained, but the question had not been really gone into by his colleagues. There were certain objections to a mandatory rule that ten per cent. should be appointed whether they were available or not, and on the whole it might be better to recruit Indians in India than in England. He agreed with Colonel Ellis's evidence on that point.

72,259. He saw no objection to the abolition of the present division into Imperial and Provincial branches, provided the distinction with regard to salary was maintained. The services should be all on one list with a common designation. Officers recruited from Europe should be granted an additional allowance.

72,260. He had no personal experience of the Madras Engineering College, but judging by results the training appeared to be sufficient. He saw no difference between the technical qualifications of Indians who came out from England and of Indians trained in India.

72,261. He was unaware of the exact conditions under which Temporary Engineers were appointed. They were doing the same maintenance work as permanent men. It would be reasonable to increase the cadre to the extent of the number of Temporary Engineers employed on permanent work.

72,262. With regard to salary, Assistant Engineers who were considered to be qualified for a divisional charge but for whom no divisional charge was available should continue to receive the ordinary annual

increments, and there should be no check at Rs. 800. He was not looking at the matter from the point of view of economy but from the point of view of the engineers themselves. The Imperial Engineers whom he represented considered that an officer had a right to expect that, with nothing against him, he would go on getting regular increments of pay.

72,263. With regard to study leave, the Indian Medical Service and the Royal Engineers were granted a certain amount of study leave for which they received pay and allowances, but engineers had to pay their expenses out of their own pockets unless they were put on deputation. Study leave should be given with allowances, to enable men to visit constructional works in other parts of the world.

72,264. The officers he represented laid very great stress on the insufficiency of existing pensions. They did not desire to have a family pension fund in substitution for the present provident fund. They had now the right to subscribe to an insurance company and to draw on their balance in the provident fund for this purpose. They were afraid that if a family pension fund was merely established and administered by Government without the promise of any Government contribution, they would not get as good terms as from leading insurance companies. There was a difference of opinion amongst the officers as to whether just as good or better terms would not be obtained from insurance companies as from Government.

72,265. (Sir Murray Hammick.) His colleagues were in favour of commutation of pension. There was the risk of an officer using the money up before his death, but it involved too much interference with a man's personal liberty for the Government to say in what manner he should deal with his own money. The officers he represented claimed that they paid largely for their pension annuity, that it was partly deferred pay, and on that ground they looked for liberal assistance from Government in the event of a family pension fund being established. They would not care for a Government family pension fund unless it was

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contributed to by Government and based on more favourable terms than the terms of an insurance company. Possibly it was the right of Government to some extent to see that an officer made reasonable provision for his family, and it was on that ground that contribution to a provident fund was compulsory.

72,266. (Mr. Abdur Rahim.) The Indian engineer who had been to England, although possibly no better theoretically than an Indian trained engineer, had certainly an advantage in that he had visited works and learned how works were carried out by European contractors. He also had some advantage in dealing with his brother officers, as European training was of value in creating an *esprit de corps* in the service. On that ground there was no reason why a small percentage of recruitment in England should not continue.

72,267. (Mr. Madge.) No Temporary Engineers, so far as he knew, had been discharged on account of there being no work for them; and there were Temporary Engineers filling posts of a permanent nature. If the cadre was increased by including trained and tried Temporary Engineers it would do no harm until the question of their promotion to the Superintending Engineer grade came up, but their absorption in the cadre would be always looked upon as a grievance by the men below them. If the administrative ranks were also increased there would be no objection. The work in the divisions was so large that they might well be broken up and extra divisions formed.

72,268. Engineering work was increasing in India, but it was not up to the standard of work in Great Britain, and it was more useful for an officer to visit works in that country. He did not suggest that an engineer should specially go to Europe for study, but when at home he should have an opportunity of visiting works, and receive an allowance for doing so.

(The witness withdrew.)

M.R.Ry. R. A. SRINIVASA AYYANGAR Avargal, Executive Engineer, Madras.

Written Statement relating to the Public Works Department.

72,277. (I.) Method of recruitment.—The Engineer Officers of the Department are at present recruited in 5 ways.—

(1) By appointment by selection in England, of Civil Engineers by the Secretary of State for India assisted by a committee;

(2) By appointment of Royal Engineers;

(3) By promotion of Temporary Engineers, however recruited in the first instance;

(4) By appointment of passed Engineer Students of the Indian Engineering Colleges; and

(5) By promotion of deserving Upper Subordinates.

The method at present followed for recruitment of Civil Engineers in England is to appoint the men selected by a Committee of Engineers appointed by the Secretary of State for India. There is no competition whatever and as such, there is no guarantee that the best available men have been selected. A system of selection, on the results of a competitive Examination, from candidates nominated by a Committee, is likely to secure far better results and is therefore recommended for adoption. The Examination should be in Engineering and allied subjects with special reference to the requirements of India. There must be at least three candidates selected for every post to be competed for.

There is a restriction placed with regard to selection in England of Natives of India and only 10 per cent. of the appointments made in any year is given to them. This restriction does not seem to be called for and there should be no restriction of race, caste or creed in respect of the appointments made in England, except in respect of the candidates belonging to the Colonies of South Africa and Australia. Inasmuch as the Governments of the Colonies do not treat the Indians with the consideration due to them, their subjects ought not to be admitted to the service of the Government of India in any capacity.

72,269. (Mr. Pears.) It might be sufficient to guarantee the out-of-pocket expenses of officers on study leave and to allow the study leave to be treated as part of an officer's furlough.

72,270. It would be a good arrangement to convert some of the present half pay furlough into a shorter period of furlough on full pay.

72,271. If a man was entitled to draw a pension in England at 1s. 9d. he should be allowed to draw it at the same rate in any other part of the world; and more especially in India, as it was obviously undesirable to penalise men for spending in India pensions paid from Indian revenues.

72,272. If a family pension fund was introduced it should be as a separate fund and not merely a modification of the present provident fund. If good engineers could be obtained on a much lower pay in India that might be, from an administrative point of view, a sufficient reason for not recruiting them in England.

72,273. (Mr. Bhaskara Ayyar.) If the Secretary of State was prepared to increase the 10 per cent. of Indians, he had no objection to offer on the part of the men he represented. He recommended different rates of pay for officers recruited in India and in England on the ground that a European officer was put to a much greater expense owing to his domicile being in England.

72,274. The view of the majority of officers he represented was that probation would deter the best men from applying for appointment.

72,275. It was not easy to learn the vernacular in England, but a certain grounding in Hindustani could be obtained. Although the vernacular was better learned in the place where it was spoken, a student in England might, during his period of probation, utilise part of his time in language study.

72,276. He would apply the proposed concession with regard to pay being continued when an officer had to wait for a vacancy to the Provincial as well as to the Imperial Engineer.

No appointments of Royal Engineer Officers have recently been made, and those that were at one time reserved for them are now being allotted to the Civil Engineers appointed from England.

There have been cases in which men who were appointed Temporary Engineers in the first instance and for whom no hopes of permanent appointment were held out, were subsequently made permanent and promoted over the heads of many of their seniors. This has caused a good deal of dissatisfaction.

With regard to appointments of men from the Indian Engineering Colleges, the practice in Madras was, till recently, to appoint the student who stood first in the Engineer class in the final examination held by an independent Board of Examiners, provided he successfully passed through the practical course. But recently, the system was changed and the rules provide for a selection by the Principal and the Chief Engineer from among the students of the Engineer Class who pass at the final examination held by the College staff. This latter system is likely to lead to undesirable results, and we would recommend the reversion to the older system.

The promotion of deserving Upper Subordinates to the Engineer Establishment, as followed in Madras, has not attracted the best of the available men, as they were always appointed with the starting salary of an Assistant Engineer. The rules are not against giving higher salaries, and a more judicious system of appointing deserving men to any class and on any salary is likely to produce better results.

According to the reply given to a question asked in the House of Commons on 19th April 1911, the number of Civil Engineers recruited in England has averaged 30 for a series of years. The number appointed in India is 14 (9 from the Colleges and 5 by promotion of Upper Subordinates). The correct figures for the last ten years are that 507 Imperial Engineers were appointed by the Secretary of State for India, which gives an average of 40.7 per year,

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and 140 Engineers were appointed in India, which gives an average of 14. Thus the annual recruitments have been 74 per cent. from England and 16 per cent. from the Indian Colleges and 10 from the Subordinates. Thus 84 per cent. of the appointments is made by Selection and only 16 per cent. by open competition. The number of Indians appointed from England during this period of 10 years is only 13, which gives an average of 1.3 per year or 24 per cent. of the recruitments. Thus, the proportion of the appointments is 72 per cent. for Europeans and 28 per cent. for Indians (including promotions from the Subordinate grades).

Taking the figures for the last 6 years since the abolition of the Cooper's Hill College, there have been 221 appointments by the Secretary of State, of which 12 are Indians and 84 appointments in India, the percentages being almost the same.

The above figures are for the whole of India. The figures for Madras are as noted below:—

Period.	Recruitments.			Percentages.	
	England.	India.	Total.	England.	India.
1904-1912 ...	26	22	38	70	30
1908-1912 ...	14	8	12	64	36

Comparing the present circumstances with those that existed at the time of the Public Service Commission, it will be found (*vide* page 362 of Appendix O of the Report of that body) that the annual recruitment from England and from the Indian Colleges was, at that time, in the proportion of 21 to 9, against 40.7 to 9 at present. Whereas the Indian Colleges got 30 per cent. of the annual appointments at the time of the Public Service Commission they get only 16 per cent. at present.

Another point that has to be noticed in this connection is that the Public Service Commission found that the recruitment from the Cooper's Hill College was excessive and recommended that 50 per cent. of the Engineers should be recruited from Cooper's Hill, 20 per cent. from the Royal Engineers and 30 per cent. from Indian Colleges. No effect has been given to this recommendation, and the recruitment from India is only to the extent of 26 per cent. of the annual recruitments, of which 10 per cent. is made up of men promoted from the Subordinate grades.

Circumstances have changed since then, the Cooper's Hill College has been abolished and no appointments are made from the Royal Engineers. The places reserved for the Royal Engineers should have been distributed equally between the recruitments in England and in India. Thus 40 per cent. of the annual appointments should have gone to the Indian Colleges.

The evidence taken by the Commission of 1886 leads one to conclude that there is very little to choose between the best Indian Engineer and his English rival. The training imparted in the Indian Colleges is sound and fairly exhaustive. This fact has, moreover, been publicly admitted by such eminent persons as Lord MacDonnell and Sir J. P. Hewett. The training is further directed wholly to the requirements in India. Taking all the above facts into consideration, it will only be reasonable if it is asserted that the legitimate aspirations of the public in India cannot be satisfied unless a greater proportion of the superior appointments is reserved for competition in India. It is suggested as a suitable remedy that at least 50 per cent. of the total annual recruitment may be made in India at present, and that this proportion should be gradually increased as conditions change.

72,278. (II.) Systems of training and probation.—As there is no guarantee that the preliminary training given to the recruits from England is such as to meet the requirements of the profession in India, they should be given two years practical training under selected Executive Engineers and where large works are in progress. During this period, they should be trained in Section and Sub-Division work, in the investigation of projects and in designing. Opportunities should also be given to them of be-

coming acquainted with the agricultural conditions of the province in which they are employed. They should also gain, during this period of probation, sufficient colloquial knowledge of the local vernacular language. If any probationer fails to give satisfaction at the end of this period, his term of probation may, at the discretion of the local Government, be extended by another year, and his services should be dispensed with at the end of three years if he proves a failure. Any plea that this is unfair or will deter candidates from England, by reason of the attached risk, may be met by the provision of free return passages to rejected probationers.

As the Indian recruit is to be appointed only on completion of one year's practical course, according to the system in force now, no further probation is necessary in his case.

Before confirmation, however, every Engineer must pass the Professional Examination prescribed in the Public Works Department Code. The English recruit should also pass an examination in the local vernacular.

72,279. (III.) Conditions of service.—The two years spent on probation by the English recruit and one year in practical training by the Indian recruit should count towards qualifying service for promotion to the Executive Engineer class and for leave, pension, &c.

Officers should be compelled to retire when they attain the age of 55 years, and the provision for the retirement at 50 of officers not promoted to the administrative grade may stand. Government should, also, have power to compulsorily retire any officer, at any time, for continued inefficiency. An officer who finds that his claims for promotion have been continuously overlooked should be given the option of retiring voluntarily at any time.

72,280. (IV.) Conditions of salary.—The present incremental system of salary has given complete satisfaction and may be continued.

The salary of the English recruit during his probation may be fixed at the initial salary of an Assistant Engineer, and that of the Indian recruit during his practical course at Rs. 250 per mensem. On being made permanent they may draw the salary due to them in the third and second year of service respectively as Assistant Engineer.

The pay of the Indian recruited element is approximately two-thirds of that granted to officers recruited in England. This is unfair and unsuitable, and has caused great discontent. Both classes of officers are recruited for and are required to do exactly the same work and bear the same responsibilities, and emoluments should depend solely on services rendered. The distinction between the two classes of officers who do the same kind of work and bear the same responsibilities should therefore be obliterated.

72,281. (V.) Conditions of leave.—There is much disparity between the conditions applying to each of these two classes of officers. There is also a difference between the rules applying to the Indian and the European recruited Imperial Engineers. Great stress has been laid on the advantage to be derived by an Engineer in visiting works in foreign countries, and the element recruited in England has received undue credit on this account. Unless the conditions of leave are the same, it becomes impossible for an Indian trained Engineer, even if he desires to do so, to secure the same advantage in this direction as English recruited Engineers.

The maximum furlough admissible to the Indian recruited Engineer under the existing rules is 2 years, the first furlough can only be taken after 10 years of active service and the interval between any two furloughs is eight years. In order to enable the Indian recruit to visit works in foreign countries when he is still young, it should be possible for him to go on furlough after six years of active service. The interval between any two furloughs ought not to be more than three years and the maximum amount of furlough admissible should also be increased to one-sixth of the active service subject to a limit of four years.

It must, also, be stated here that the duties of a Public Works Department officer are very onerous and trying, and he requires more frequent rest for

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recruiting his health than any other class of officers. In this respect both Europeans and Indians are alike and there should therefore be no distinction between them.

The allowance during furlough should be half the average emoluments subject to a maximum of Rs. 1,000 per mensem if paid in India and £800 per annum if paid in a foreign country.

Privilege leave. Under the present rules an officer can earn privilege leave to the extent of one calendar month for every eleven complete calendar months of duty, and such leave is cumulative up to a period of three months only. In the case of officers who have accumulated the full period it frequently happens that the exigencies of the public service prevent their being granted privilege leave when they desire it, and this leads to the leave lapsing through no fault of their own. It would, in a measure, mitigate against this loss of leave on full pay which an officer has fully earned if the cumulative period were extended from three to six months.

An officer should be allowed to avail himself of all privilege leave due to him immediately prior to retirement and be permitted to retire from the service at the end of the leave without being obliged to return to duty as he is now obliged to do. This concession has already been made when privilege leave is combined with other leave, and its extension to privilege leave alone, besides removing a legitimate grievance among officers of the Department, would lead to much less administrative inconvenience than is now the case.

Study leave. Modern civil engineering is a highly specialised profession and progress in the methods of construction is very rapid. In view of the vast undertakings of the Government of India in the Public Works and Railway Departments, it is essential for efficiency and economy, that the engineering staff of these Departments should keep themselves abreast of modern engineering practice. This can only be accomplished by visiting and studying works of special interest in progress in different parts of the world. The officers of the Public Works Department should be encouraged to visit large works wherever in progress and should be provided with every facility for doing so. Either new rules should be introduced to admit of these facilities being granted, or there should be a much more liberal interpretation of the existing rules regarding the placing of an officer on deputation.

72,282. (VI.) Conditions of pension.—Here again there is a much resented distinction (Vide Art. 636 Civil Service Regulations) which will create invidious and unjust anomalies. As it is a well and universally established principle that pensions are granted as retiring provisions for specific services rendered to the State, it is illogical and unjust to create or maintain any distinction in this direction between persons who have, in fact, rendered exactly the same services. In other words pensions ought to be wholly and solely dependent on specific services rendered and not on the place of original recruitment, for this does not involve any special merit.

The maximum amount of pension should be raised to Rs. 7,500 per annum as the cost of living has considerably increased since the amount was fixed at Rs. 5,000.

The service required for voluntary retirement is rather long and may be fixed at 25 years.

The period of furlough to be counted as service for pension requires to be increased as noted below:—

After a total service of 15 years	... 1 year.
do. 20 years	... 2 years.
do. 25 years	...
and above 3 years.	...

The emoluments of officers in the Public Works and Railways Department are not sufficient to admit of their making adequate provision for their families should they die in harness and there is no official family pension fund for these departments. The knowledge that they are unable to make such provision and that their pensions are purely personal and cease with their death is a source of great anxiety to many an officer whose duties take him into places which are prejudicial to health. There is a strong desire, therefore, that means may be found whereby

an officer may be aided in making suitable provision against the event of his death for the members of his family dependent on him. As pension has been defined as deferred remuneration it means that a certain portion of the officer's salary is kept back to provide for pension after retirement. As an officer deputed to foreign service has to contribute towards his pension at the rate of one-sixth of the pay he would have received in the British service, it may be presumed that an officer now receives only six-sevenths of the pay he would have received had there been no provision for pension. It is recommended that a portion of this amount which is thus kept back from the salary of an officer may be commuted as an annuity for his widow and children if he happens to die in harness or soon after retirement.

72,283. (VIIa) Limitations in the employment of non-Europeans.—At present the employment of non-Europeans (Statutory Natives of India) is restricted to the appointments made in India and to 10 per cent. of those made in England. This limitation is uncalled for, as no irreducible minimum of the European element seems necessary in a department which is a purely professional and scientific service and has no share in the political administration of the country and in which the employment of purely Indian element will in no degree imperil the British supremacy.

It has already been suggested under the head Recruitment that 50 per cent. of the appointments may be from England and 50 per cent. from India. The recruitment in England should be open to all British subjects (except to those of the Colonies) irrespective of domicile, caste, creed, or colour.

72,284. (VIIb) Working of the existing division of service into Imperial and Provincial.—The division of the Public Works Department into Provincial and Imperial sections has been anything but a success and can never be so, in view of the surrounding circumstances and the past history of the Department. The distinction created between the two classes of officers who do exactly the same work and bear exactly the same responsibilities is intensely resented and will, inevitably, result in splitting up the whole Public Works Department into two hostile camps and this must greatly injure efficiency. The interests of the two classes of officers are now widely divergent and this is conspicuous in their relations. The lower pay that the Provincial receives has branded him as belonging to an inferior service and has lowered him considerably in the estimation of the public.

So long as the two classes possess, on the average, equal educational qualifications and professional attainments—and this is undoubtedly the case—any differentiation between them is unworkable. It is impossible to force a distinction in pay where none exists in attainments and any attempts to do so must create complication and raise issues which it would be as well to avoid.

It has already been stated that the training given in the Indian Colleges compares very favourably with that given on the Continent of Europe and it is a fact that many Indian trained Engineers possess superior qualifications to some officers recruited in England. It is also an admitted fact that in the investigations of some of the big projects in the Madras Presidency the Indian trained element was greatly in requisition and had to bear the greater share of the burden and responsibilities of the work.

It is therefore urged that the differentiation between the two services should be abolished and that the alumni of the Indian Engineering Colleges should be restored to the position they formerly occupied; that is to say, there should be only one service in the Public Works Department.

72,285. (VIII.) Relations of the service with the Indian Civil Service, &c.—It would be for the good of the country if the relation between the Public Works Department and the Indian Civil Service were more cordial than at present.

72,286. (IX.) Other points.—The restriction now imposed on the people of one province (other than those of the domiciled community) disabling them from competing for the guaranteed appointments in other provinces should be removed.

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The College of Engineering at Madras does not attract the best available talent in the country, as the prospects of passed students other than those who get the guaranteed appointments are not very encouraging in the Public Works Department, and as the door for entrance to other Departments such as Revenue Survey, Salt and Abkari, Trigonometrical Survey, Railway and Telegraphs, where they can be employed advantageously on account of the special training received by them is now practically closed to them. The passed students should therefore be employed wherever their special training will be beneficial so that the best available talent may be attracted to the College and thereby a still better class of men be had for local recruitment of our requirements and the efficiency of the department be thereby increased.

When I submitted my first Memorandum I dwelt in detail on the subordinate Service. But this service has been since reorganized more or less on the lines indicated by me and the only point that requires consideration is whether the incremental system of salary will be preferable to the present graded system. The consensus of opinion seems to be in favour of the former.

If after all it is decided to have a Provincial Service in the Public Works Department as in the Revenue and Judicial Departments, it is suggested that a few appointments of Executive Engineers may be listed as in those services for the promotion of deserving subordinates. Six such appointments may, for the present, be listed. The Provincial Service should, in such a case, be intended solely for the Subordinates and those promoted to the Executive

M.R.Ry. R. A. SRINIVASA AYYANGAR called and examined.

72,287. (Chairman.) The witness represented the Indian engineers of the Imperial service. He was recruited under the rules by which one guaranteed appointment was given; there were only five such officers now in the service. There were two recruited under the 10 per cent. rule. He was Executive Engineer of the Chingleput district, and had completed nearly twenty-eight years' service.

72,288. The Public Works Department should be recruited both in India and England by competitive examination, and the division into Imperial and Provincial branches should be abolished, as the training given in Indian colleges was as efficient as that given in English colleges.

72,289. Fifty per cent. of the superior posts should be filled by recruitment in England and 50 per cent. by recruitment in India, but Indians should be allowed to compete in either country. The 50 per cent. recruitment in England was only suggested as a temporary measure, as the indigenous element might be introduced in greater proportion as time went on. The 50 per cent. in either country might consist of all Indians or all Europeans according to the results of the examination. The present proportion of officers recruited in India had been laid down by the Government as 30 per cent., but there had not been sufficient time for that percentage to be reached. Since 1886 a relatively smaller number of students had been taken from the colleges. In the early days the bulk of the students came from Rurki and were Europeans. The system of recruitment in India would be on the results of a final examination similar to that at the Madras Engineering College. The competition should also take into account college work, and it might be confined to provinces. He had no objection to a central college if it could be arranged. The superior service might be concentrated in the one college and the provincial colleges might train only for the subordinate services.

72,290. He did not approve of the present system of payment of officers recruited in England and in India. An allowance might be given to the European but that should be based on what he would receive in his own country and not on market values in India. If an Indian served in England it would be reasonable for him to be paid something more than he would be paid in India in consideration of the fact that he was serving in a foreign country.

72,291. If the distinctions of title were removed as between Imperial and Provincial, and the pay of

Engineer grade from the Subordinate service. All those recruited as Assistant Engineers whether in India or in England should belong to one service, i.e. the Imperial. Even this is not liked by the Subordinates. When a Subordinate is considered fit to be promoted to an Engineer's place, he must receive the same remuneration as his brother officers doing the same work.

The scales of travelling allowance given to officers and subordinates were fixed long ago and since then circumstances have changed, the cost of everything, including servants and cart hire, has increased, the allowances are found inadequate to meet the cost of travelling and many officers are obliged to meet a portion of their travelling expenses from their salary. It is therefore reasonable that these allowances should be increased by 50 per cent.

Officers are put to much expense when they are transferred from one place. The expenses of breaking up establishment in one place and of setting it up in a new place and the loss incurred by the sale of furniture, carriages, &c. at one place and buying new ones at the other are in themselves very heavy. Add to this, the cost of moving one's self with family, servants, and the necessary articles of luggage is considerably more than what is paid by Government. The net result is that many an officer is considerably out of pocket by a transfer which is, therefore, regarded as a great punishment. It would be more satisfactory if a liberal set of rules were introduced which would enable an officer to recoup what he actually spent. The Scale recommended by the Madras Government in July, 1912, may be adopted.

officers made the same, it would remove some of the dissatisfaction now existing amongst provincial officers, but the question of the foreign allowance would be a difficult one to deal with. If the pay that a European received in India was a little more than that which he would receive in his own country there appeared to be no necessity for paying any foreign allowance. The grievance might be removed if the European officer received the same salary plus a foreign allowance.

72,292. Certain posts in the Executive Engineer grade should be allotted to upper subordinates, if the division into Imperial and Provincial continued, but if there was only one service the proportion of promoted upper subordinates should be left to the discretion of the Government.

72,293. (Lord Ronaldshay.) He was drawing the same pay as European officers and he only put forward the complaints in his written statement in the interests of his countrymen.

72,294. (Sir Theodore Morison.) At present the provincial service salaries were not adequate to keep up the status and dignity of an engineer. It was true that men came into the service, but for the present they had no other choice. The engineering college was not popular and only a few students entered it.

72,295. (Mr. Madge.) He attached a great deal of importance to the passing of an examination, but did not think mere examination was a sufficient test. Recently the system in the Madras college had been changed. Formerly there was an independent board of examiners but now the examiners were the college staff. He advocated a return to independent examiners.

72,296. There were Anglo-Indians in the subordinate service but none in the provincial. So far as he had seen the work of these subordinates, there had been some good and some bad specimens.

72,297. Any foreign allowance given might also be based upon the difference in the cost of living between the two countries.

72,298. There was a risk that, if men were discharged during the period of probation, recruitment would be affected owing to the uncertainty of appointment, but that could not be helped.

72,299. (Mr. Abdur Rahim.) He had known of no Madras College Engineer being employed on the railways.

72,300. The Assistant Commissioners, Inspectors and Assistant Inspectors in the Salt and Abkari Depart-

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ment had to do a good deal of constructional work for which a knowledge of engineering was required, and a training in the Madras College would help them considerably. They were given some training now in engineering.

72,301. (Mr. Pears.) He had heard of no difficulties in securing recruits in England. With regard to training under an Executive Engineer, it was part of that officer's duty that he should allot time for the work. On the whole the training given by executive engineers was adequate, but it might be improved if the probationers were taken over works. That was possible under the present system, but it was not always done.

72,302. With regard to the system of promoting deserving upper subordinates and its failure to attract the best of the available men owing to their being appointed on the starting salary of Assistant Engineers, that was due to the fact that the highest men in the upper subordinate service were getting

(The witness withdrew.)

M.R.Ry. N. SWAMINATHA AYYAR Avargal, Executive Engineer, Madras.

Written Statement relating to the Public Works Department.

72,304. (I.) **Methods of recruitment.**—The method of recruitment followed in England for the Imperial Service of the Public Works Department has not been the same all along. First there were the Royal Engineers who are not being appointed now and have almost disappeared as a class. Subsequently there was the Royal Indian Engineering College at Coopers Hill from where the men required for Service in the P.W.D. were appointed. The College too has been abolished and the method followed at present is appointment by selection by the Secretary of State for India assisted by a Committee. It is too early yet to say whether this method will prove satisfactory; but it appears fairly certain that it is not likely to secure the best talents suited to the requirements of service in this country. Selection on the results of an unrestricted competitive examination in Engineering and allied subjects fixed with special reference to the needs of service in this country and in one Indian Vernacular, so as to secure only persons of proved educational qualifications will be far more satisfactory than any other system which could be thought of and will not be open to reproach as the other methods of selection pure and simple or selection on the results of a competitive examination of the nominated candidates.

In the case of the Provincial Service the method of recruitment was till recently, to appoint the student of the Engineer class who came out first in the examination held by a Board of Examiners, after his completing satisfactorily one year's apprentice course in the Department. This system has been changed and the rules provide at present for a selection by the Principal and the Chief Engineer from among the students of the Engineer class who passed the examination held by the College staff. This latter system is likely to lead to undesirable results as it places the students under the mercy of the Principal of the College and a reversion to the former system which has worked hitherto with such good results is very necessary. If there are any grounds for complaint, they are due mostly if not entirely to the defects in the constitution and working of the College and the unattractive openings held out to passed men about which more will be said later on.

There is also another source of recruitment to the Provincial service by the promotion of deserving Upper Subordinates already in Service at the rate of one in every alternate year. Considering how the prospects of Sub-Engineers have been improved recently, their promotion to the Engineer Establishment on the initial salary of an Assistant Engineer is not at all attractive and as a result of this the whole class of Sub-Engineers have no stimulus to work well and earn this special promotion. Better results will be secured if promotions are made to any class and grade of Engineer Establishment on any salary.

more pay than they would get at the bottom of the provincial list. Asked whether the college would not become unpopular if the promotion of the officers were retarded, the witness said that if upper subordinates were promoted to a higher class of the provincial service, the promotion of men who came in direct from the college would be retarded to a certain extent, but generally speaking the men in the upper subordinate grade had also come from the engineering college.

72,303. (Mr. Bhaskara Ayyar.) From his personal knowledge of the expenses of provincial officers he was able to affirm that the present scale of salaries for the provincial service was inadequate. The pay the Imperial engineer received was just sufficient to enable him to maintain his position. He would not be content with a scale of pay midway between the present pay of the Imperial and Provincial engineers; it was necessary that the pay should be on the Imperial scale.

72,305. (II.) **Systems of training and probation.**—As the practical training had in England is not likely to meet the requirements of service in India, the recruits from England should be given two years' practical training in this country under selected Executive Engineers in all kinds of work they will be called on to do. During this period they should gain sufficient colloquial knowledge of the local vernacular. At present their experience is gained wholly while in active service; this not unfrequently places them at a disadvantage resulting in inefficiency and should not be allowed to continue. If any probationer fails to give satisfaction at the end of the period, his term of probation may, at the discretion of the local Government, be extended by another year. His services should be dispensed with if he proves a failure at the end of 3 years. Any plea that this will deter candidates from England by reason of the attached risk may be met by the provision of free return passages to such rejected probationers.

In the case of men appointed locally the training and probation might be limited to one year; but they should be given proper facilities to learn work. At present they are left severely alone and nobody takes care of them. With their own unaided effort they have to learn what is necessary for doing the work of the Department and it is nothing surprising that it takes a longer time than necessary for them to learn and do their work efficiently. Their inexperience is only too readily mistaken for inefficiency. If they are only taken care of properly and proper opportunities are given them to learn work they will prove very efficient indeed in the space of one year. If any probationer fails to do so, his term of probation may, at the discretion of the local Government be extended by another year.

72,306. (III.) **Conditions of service.**—For one work and same responsibility there should be one service with absolutely no distinction of any kind. All officers required to carry out the ordinary work of the Department should be in one list and treated alike in every respect. The special posts requiring specific qualifications should be filled by special men and these latter should not be asked to do the ordinary work of the Department. Also the men appointed temporarily for carrying out specific works should be employed on those works only and their services terminated as soon as they are completed.

Officers should be retired compulsorily when they attain the age of 55 years and the provision for the retirement at 50 of officers not promoted to Administrative grade may stand. Government should also have the power to compulsorily retire any officer at any time for continued inefficiency. Also an officer who finds that his claims for promotion have been continuously overlooked should be given the option of retiring voluntarily.

72,307. (IV.) **Conditions of salary.**—The present incremental system appears to be quite suitable. But

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there should be no difference in the salaries of the men appointed to do the same duties merely because they are recruited differently. Any such difference is felt as a great grievance when both do the same work, and what is worse, brands those receiving less, as being inferior. Very often the treatment given to those receiving less pay is also different and to give only a few instance of the same there are:—

(1) The denial of the grant of Presidency Allowance to Provincial officers, when their Imperial brethren are having it, there being no reason for this anomaly;

(2) The way in which the reorganisation of the services was carried out in 1903 failed to give satisfaction to the Provincials and it proved an uphill task for them to get it modified. Even the one recently sanctioned in 1912, though an improvement on the previous one, does not abolish all distinction between the two services. The one main principle to be recognized is that the pay is for the post and not for the man. No difference can be logically maintained without destroying efficiency.

72,308. (V.) **Conditions of leave.**—The duties of a P.W.D. Officer are very onerous and trying and he requires more frequent rest for recruiting his health than any other class of officers. In this respect both Europeans and Indians are alike and there should therefore be no distinction between them. But there is at present much disparity between the conditions applying to each of these two classes of officers.

The maximum amount of furlough admissible at present for Indians is only 2 years and the first furlough can be taken only after 10 years of active service, the interval between any two furloughs being 8 years. It should be possible for an officer to go on furlough after six years active service and the interval between any two furloughs ought not to be more than three years. The maximum amount of furlough admissible should also be increased to $\frac{1}{2}$ of the active service subject to a limit of 4 years.

The allowances during furlough should be half the average emoluments subject to a maximum of Rs. 1,000 per mensem if paid in India and £800 per annum if paid in a foreign country.

Privilege Leave and Study Leave.—(The representation under these heads is the same as that in paragraph 72,281 ante.)

72,309. (VI.) **Conditions of pension.**—(The representation under this head is the same as that in paragraph 72,282 ante.)

72,310. (VII.) **Such limitations as may exist in the employment of non-Europeans and the working of the existing system of division of services into Imperial and Provincial.**—(a) At present the employment of non-Europeans is restricted to the appointments made in India and to 10 per cent. of those made in England. This limitation is uncalled for as no irreducible minimum of the European element seems necessary in a Department which is purely a professional and scientific service and has no share in the political administration of the country. The percentage of recruitment made from England for the Madras Presidency during the last 10 years is 70 while that from India is 30 inclusive of those promoted from the subordinate service. Considering the fact that the training imparted in the Indian colleges is sound and fairly exhaustive and is further directed wholly to the requirements of the service in this country and that there is very little to choose between the best Indian Engineer and his English rival, it will be only reasonable to employ local talent to the fullest possible extent without any restriction whatever, by reserving a very great proportion of the appointments for competition in India. The recruitment from England should be limited to

(1) the special posts requiring specific qualifications,

(2) the minimum number of ordinary posts which will enable the filling up of half the number of higher posts in the administrative grade.

This end will, it is believed, be achieved by recruiting from England about one-third the number of men required for the Department exclusive of the special posts, the remaining two-thirds being recruited from the local Colleges. In fact no proportion need be fixed at all regarding the employment of the latter,

and what is suggested above is only as a tentative measure.

(b) The division of service into Imperial and Provincial which came into force only in 1896 has proved very unsatisfactory and is felt as a great grievance. The lower pay the Provincials draws has lowered him in the estimation of public. Not only this, the Imperials consider themselves superiors, and treat the Provincials as their inferiors. There is thus a distinct line of cleavage between the two, which increases with their service in geometric progression. One of proved merit in the Provincial Service has at present no chance before one of the Imperial Service who is not quite so good. Owing to the unfair treatment accorded to the Provincials and the lack of opportunities to show themselves they come to lose interest in their work and are pronounced as failures. The division of services should cease to exist as soon as possible.

72,311. (VIII.) **Relations of the service with the Indian Civil Service and other services.**—As a result of the division of service into Imperial and Provincial and the consequent differences in pay, treatment, etc., the latter do not command the same respect from the officers of the Indian Civil Service and other services. Consequently they do not move with them as much as they should. An improvement in their relationship is highly desirable and the abolition of the division of service into Imperial and Provincial advocated above will surely hasten it.

72,312. (IX.) **Any other points within the terms of reference to the Royal Commission not covered by the preceding heads.**—The method followed at present in the appointment of Temporary Engineers in the Public Works Department on higher salaries for doing the regular work of the Department is felt as a sore grievance both by the men who have entered service from the way in which their prospects are affected and by those who have passed out of the College, from the way in which their claims have been overlooked for no obvious reason, very often, in favour of others who are not possessed of the same educational qualifications. Too much stress is laid on the value of practical experience and theoretical knowledge which is taken at a great discount in support of the above policy. But its effects are very far-reaching and has resulted in keeping out capable students from entering the College, as their prospects are miserably poor and disappointing, when they fail to come out first.

The recruitment of the Upper Subordinate Establishment employed so largely to assist the officers in carrying out the work of the department deserves to be considered specially in the grade of Sub-Engineers as success is dependent in a large measure on them. The majority of the men who are to do the onerous duties of Sub-Divisional Officers are drawn from this class and it cannot be said at present that they are all able to carry out their duties intelligently and efficiently, as they do not possess the requisite educational qualifications nor do they take pains to improve themselves. It is highly desirable to limit the selection and take in only the promising and deserving men. The deficiency in their number should be made up by appointing the passed Engineer students of the local Engineering College as temporary Engineers and after some years' trial they might either be confirmed as Sub-Divisional officers or done away with. This is not done at present with the result that the capable passed Engineer students first seek employment either in the Local Fund or Native States and those who fail to secure such appointments enter the Public Works Department in a subordinate capacity as temporary Overseers; because there is no scope for employment outside the above services nor can they afford to take up any other line after incurring all the expenditure and trouble in completing this course. Instances are not wanting even among these men leaving the Public Works Department when they are able to secure a place elsewhere. Thus the Public Works Department fails to secure the services of all capable men while it could have the choice and engages only those who are not quite so good and this policy results in the inefficiency of the subordinate service. Government too do not get proper return for the money spent in the education of such students in the Engineering College. If after

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securing the capable students as Temporary Engineers, there are still grounds for complaint as regards the quality of men who come out of the college, the proper course will be to alter the constitution and working of the College suitably to meet the requirements of the Public Works Department. In doing so, the requirements of the other allied services, viz., the Local Fund, Municipal and Sanitary, might be considered. For instance a general course might be prescribed to all students entering the Engineer and Subordinate classes for about 2 years or so, and opportunity given in the last year or two to specialize

themselves either in Civil, Mechanical, Electrical, Municipal, Sanitary and Road Engineering. There will be then no complaint about the dearth of qualified men for the several services on the one hand and want of scope for the employment of passed men on the other. This latter will in its turn result in attracting capable and intelligent students to enter the College and making the service more efficient. The scope for employing local talent without impairing the efficiency of the services will also be increased. *Travelling allowance.*—(The representation under this head is the same as that in paragraph 75,286).

M.R.Ry. N. SWAMINATHA AYYAR called and examined.

72,313. (Chairman.) The witness was an Executive Engineer of twelve years' service, and represented the Provincial Engineers of the Public Works Department. He was trained in the Madras college.

72,314. The present division into Imperial and Provincial branches should be abolished and recruitment in England should be limited to special posts requiring specific qualifications such as Superintendent of Workshops, Electrical Adviser to Government, etc. The remainder of the service should be recruited one-third in England and two-thirds from local colleges. A proportion of the two-thirds recruited in India would come from the subordinate service. Most of the subordinate officers had been educated in the college, and they did not endeavour to improve themselves after entering the service and therefore did not make efficient sub-divisional officers when they attained that rank. They had lower educational qualifications as they had only to pass the school final examination, whereas the qualification for the provincial service was that of graduate. In the college they were trained in separate classes and under separate masters.

72,315. The most successful students in the Engineer class of the Madras Engineering College entered the Public Works Department and the next best went into local services or to Native States. Most of them preferred to go into Native States where they rose to positions of rank and responsibility. If any were left over they entered the Public Works Department in a subordinate capacity.

72,316. He did not agree with the principle that a European serving in India should have an additional allowance in the shape of pay, but he might be given something in the form of first-class passage money to and from England when going on leave or furlough. He would be willing to serve in England himself without any extra allowance provided his passage money was paid. He thought the members of the service would all take that view and would be prepared to serve thousands of miles away from their own home on the same pay they were receiving in India.

72,317. (Sir Murray Hammick.) His reason for saying that the new system of appointment was not likely to secure the best talent was that the members of the selection board were not likely to know intimately all the merits of the candidates who appeared before them. He knew nothing about the method of selection in England, but thought that the selection board would be able to judge the men properly. When the number of candidates was so large it was impossible for a committee to obtain any intimate knowledge of them. Further, the men were drawn from several institutions no two of which had a common standard.

72,318. With regard to his remarks in the written statement on the subject of selection by the Principal of the College and the Chief Engineer, the difficulty was that the student had a suspicion that if he offended the Principal he might not have the same chance. It might not be a justifiable suspicion but it acted on the student. The Chief Engineer was generally swayed by the recommendation of the Principal and there was a suspicion that intelligence and merit might not obtain their reward. He himself apprehended no unfairness but the suspicion was there.

72,319. At present he was drawing Rs. 630 a month. He did not consider any extra allowance would be necessary if he were appointed to serve in Peshawar.

72,320. (Mr. Abdur Rahim.) The apprentice in the engineering department was simply attached to a division under the orders of an Executive Engineer. He was allowed to learn what he could by going about the place, and taking notes which he submitted every three months. No remarks or orders were passed thereon. The engineer under whom the apprentice was placed did not give him any instructions. He did not know how the English probationer was treated, but he did not suggest there was any difference in the manner in which the two classes of probationer were trained.

72,321. In his opinion an apprentice should be made to do the work of a sectional officer for some time, to inspect large works, and to take notes of them with the help of the officer who might be in charge. At a later period he should be given the charge of a sub-division.

72,322. The travelling allowance of an apprentice engineer was sufficient; he received Rs. 3 per day and first-class fare.

72,323. (Sir Valentine Chirol.) He had never served out of the Madras Presidency. He had never been to Peshawar, but he had friends there. They had not told him what the conditions were. He would not claim any extra allowance merely because he was sent to a foreign district.

72,324. (Mr. Madge.) He did not think the British element was at all necessary in the service.

72,325. (Mr. Chabul.) If he served in Peshawar he would take his wife and children with him. When his children were old enough he would send them back to Madras to be educated. That would mean more expense to him than if he was appointed to the Madras Presidency, and he would expect some allowance to be made. This allowance should not have anything to do with pay.

72,326. With regard to travelling expenses, he would expect to receive travelling allowance for himself and his wife and children.

72,327. (Lord Ronaldshay.) He suggested that an Indian vernacular should be a necessary subject for engineer officers recruited in England in order that such men could show their attitude or otherwise, for learning the vernacular. He admitted it would be rather unfair to an English engineer officer who was not successful in the competitive examination to have been obliged to spend a large part of his time in learning a language which would clearly be of no use to him in his later life, but he pointed out that Indians, who would compete with the English officer, were also under a similar disadvantage in having to learn the English language. At the same time he agreed that a knowledge of English would be of advantage to an Indian engineer even if he failed in his examination. He had not viewed the matter in the light that if a knowledge of the Indian language was insisted upon as one of the subjects for the competitive examination, it would deter English engineers from entering the examination.

72,328. (Mr. Pears.) Passed-out engineer students of the Civil Engineering College preferred Native States to local funds.

72,329. (Mr. Bhaskara Ayyar.) He did not mean to suggest that the present system of selection was badly exercised. What he meant to say was that, however fair a Principal might wish to be, it was impossible for him to avoid an unconscious prejudice, arising from the circumstances that he had known the students in his college, and had formed some impres-

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sion about them. If one scale of pay was made common to all the Provincial and Imperial engineers, and the Imperial engineers were given a foreign allowance, and the recruitment of Indians was

increased, the discontent of the Provincial engineers would not be in any way mitigated. There must be absolute equality in pay, and also a larger recruitment in India.

(The witness withdrew.)

W. H. JAMES, Esq., B.Sc., Principal, College of Engineering, Madras.

Written statement relating to the Public Works Department.

72,330. [The undersigned is not a Public Works Department Officer and can express no opinion based on actual experience in regard to the conditions of service in the Public Works Department but, as principal for some years past of the institution from which a great majority of men employed in the Department are drawn, is closely concerned with the subject of recruitment.]

ENGINEER OFFICERS.

Recruitment in England.—No information is available as to the considerations that influence the Secretary of State's Advisory Committee in making appointments to the Public Works Department cadre, but I would, in any case, advocate that no engineer should be regarded as eligible for service in India unless he has had at least two years' practical experience in workshops or on Engineering works, in preferably some subordinate position and not as a premium apprentice. The longer this practical training up to a limit of say four years, concomitant with his having pursued a thorough theoretical course, the better fitted I should regard the candidate for employment in this country. There should also be a real and effective period of probation for two or three years before confirmation as a permanent officer.

Recruitment in India.—This is a matter of very great importance, for, India like all other countries, must in this mechanical age come to depend more and more for her progress and development on technical and in particular on Engineering skill, and whatever is possible should be done to foster indigenous talent.

The provision of adequate and up-to-date facilities for preliminary theoretical training is naturally called for in the first place, but the creation of well-qualified and practical class of experts is only possible if those Indians, who take up Engineering work, are encouraged in every way and given full scope for exercising their projection.

It can hardly be denied that, in general, the best brains of the country are at present drawn to seeking careers away from technical work. This, perhaps, is due partly to there having been no tradition in the past leading the higher and more intellectual classes to the study of applied science, but a greater present bar is the limited opportunity afforded in connection with Engineering work, and also the much larger prizes to be won in other walks of life.

For admission to this institution the general educational qualification demanded is of the standard of the Intermediate Examination in Arts of the University of Madras with Mathematics and Physics as the chief subjects. Selection from among the candidates is made by the Principal on the University examination records, and the students after admission pursue a college course extending over four years, followed by one year in workshops or on engineering works. After the first two years, the course bifurcates, and the students elect to qualify either as civil or mechanical engineers.

One appointment as Apprentice Engineer in the Public Works Department is conferred annually by the Chief Engineer, Public Works Department, in consultation with the Principal, College of Engineering, on the student, either civil or mechanical engi-

neer, judged most suitable on the results of the examination and the promise shown by him and his general behaviour during the college course. The Apprentice Engineer is brought on to the permanent establishment of the Public Works Department as an Assistant Engineer at the end of the year of apprenticeship.

So far as Madras students are concerned, this is the only appointment open in the Engineer Establishment of the Department. The Government Order sanctioning the first regular and annual appointment of this kind is dated as long ago as May 14th, 1872, when the number of officers serving in the Public Works Department was naturally smaller than at present, and the question might very well now be considered whether something cannot be done in this direction.

I am myself not particularly in favour of appointment direct from College and would prefer selection should be made from among the three or four best students of the year after a probationary period of say two years in the Department. Selection might still remain with the Chief Engineer in consultation with the Principal of the College, based as at present on the results of the examinations and promise shown during the college course, but together with the further information that would then be available in regard to the aptitude shown by the probationers for practical work.

I would throw open more appointments in the Superior Service to men selected under such conditions, so that they may be afforded ample opportunities to show their worth, but promotion to the higher executive grades should be strictly on merit and not a mere matter of seniority. Men who after some years are regarded as unfit for promotion should be asked to resign and to allow of this being done without a suggestion of hardship, they may be granted some kind of retiring or compensation allowances with liberty to engage in other work.

UPPER SUBORDINATE OFFICERS.

Some appointments to the Engineer Establishment are made from among the Upper Subordinates. The College training of the subordinate is appreciably lower in standard than that of the Engineer student. The educational qualification for entry is the equivalent of Matriculation, and our present system is to admit the student in the first place to what is termed the Probationary Subordinate Class. Selections are made after two years from among the students of this class for promotion to the Upper Subordinate Class for a further course extending over two years, followed by a year of practical training in the Public Works Department. The unselected pass out at the end of the third year as Lower Subordinates. This arrangement, which really constitutes an attempt to improve the type of Upper Subordinate by obtaining men who at least show some promise in elementary engineering studies, was only introduced a few years back, and it will take some time to judge the results with any certainty.

After some service in the department, the more capable of the subordinate officers are offered promotion to the grade of Assistant Engineer, but this should come sufficiently early to make acceptance of some material advantage. I would not be in favour of increasing the number of promotions from that class.

Mr. W. H. JAMES called and examined.

72,331. (Chairman.) The witness had occupied his present position for over six years. He had been in the service for twelve and a half years. He was appointed to the professorship of engineering when he first came out in 1901, and remained in that post for about six years.

72,332. The course of training now given at the Madras college was adequate for officers of the superior grades of the service, but it could be made better. Government had now a large scheme under their consideration, and provided that scheme was accepted, and the requisite staff and equipment were

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provided, the training at the college would be considerably improved. There were 382 students at the college. There were also other students undergoing practical training, making a total number of 435. One hundred and twenty-five students were in training in the classes of the provincial service standard from which number one was appointed to the higher service every year. Of the remainder, 50 per cent. accepted appointments in the subordinate ranks of the Public Works Department, 25 per cent. went into local funds, 10 per cent. went with the Native States, and the rest took up various appointments. There were very few openings in private firms in Madras.

72,333. The pupils under training for the subordinate service were kept quite separate from those under training for the provincial service. Students who contemplated entering the provincial service underwent a higher course of training than those who contemplated entering the subordinate service.

72,334. There were no residential arrangements at the college. Students had facilities to go to the Victoria hostel with pupils of other colleges.

72,335. The present method of training for the upper and lower subordinate services was to admit pupils to a probationary subordinate class. After two years in that class, selections were made for a further course of three years, to qualify students for the upper subordinate branch. Those who were not selected stayed an additional year, and then entered the service as lower subordinates.

72,336. The students in the engineer class entered the college after having gone through the intermediate course, and naturally the college was able to train these students up to a much higher standard. The qualification for entry for pupils intended for the subordinate service was the matriculation or school final.

72,337. He was not in favour of the suggestion that in view of the very small recruitment to the provincial service each year in the various provinces, it might conduce to efficiency of training and possible economy if all the students entering the provincial service were trained at the same college. In the first place India was much too large a country, both in point of area and of numbers, for a college of that kind to serve the purpose intended. Nine or ten men each year were taken into the provincial service, and for classes of that standard, not more than twenty-five students in a class could be properly dealt with. If there was a central college of the kind suggested it meant there would be a class of twenty or twenty-five students, from which nine each year would be selected and put into the Imperial service. In his opinion Government would not get so good a selection by that method as if the appointments were distributed amongst the existing colleges. A college in each of the major provinces was absolutely essential,—apart from any considerations of recruitment for the provincial service. The training given to students who contemplated entering the subordinate service would not suffice for the 35 per cent. of men who were taken into the local funds and Native States. The latter required the same training as provincial engineers. He would also point out that difficulty might arise in getting the best men from Madras to go to a central college, as they might not desire to leave the presidency.

72,338. He regarded it as very important to give every opportunity to Indians to become thoroughly trained, because he considered that as engineering works developed in India, as much indigenous talent as possible should be employed. Therefore he was anxious to see each of the provincial colleges brought up to the highest possible standard. He would throw open more appointments in the superior service to Indians trained in India. At present the figure was 30 per cent. He would prefer to see the 10 per cent. of Indians now recruited by the Secretary of State in England recruited in India by local governments.

72,339. The course at the Madras college lasted four years, with one year on works. That was a year more than Rurki. Therefore, Madras college naturally thought its curriculum was a little more advanced than that of Rurki. He could not put in a return as to the difference between the two curricula, as Rurki college did not publish their syllabus in the calendar. He thought it was necessary to have a fourth year.

From the experience he had obtained of work in India, he had himself advocated the lengthening of the period. The four-year course had only been in vogue two years, and the results of the change were not yet available, but he believed the extra year would effect a great improvement. The reason for the extension was that formerly students in the Madras college were accepted after they had passed the B.A. degree. They came in up to the age limit of twenty-two and he found they were rather old to start engineering. Therefore the qualification had been cut down to the intermediate, and the course lengthened, in order to give the students an additional year of special training. Students at present were taken in up to twenty years of age.

72,340. Although he was not in favour of increasing the number of promotions from the upper subordinate service to the superior service, he certainly would have no objection to promoting an exceptional man.

72,341. He did not suggest any improvement in the training for subordinates.

72,342. At present the Madras college gave a very inadequate workshop course. The surveying work was carried out very satisfactorily, because students were given a month in the field. What was chiefly wanted in the college were workshops and laboratories.

72,343. He would not suggest sending Indian students to England after they had been turned out of college; he would after the period of practical training put them straight into the service.

72,344. (Lord Ronaldshay.) No Madras college students went into the Telegraph Department. They were given instruction in electrical engineering, but the college had only just started a course in that subject, and their great desire was to increase the laboratory facilities in order to give proper instruction.

72,345. Students who had passed the regular course of the college were as efficient theoretical engineers as students who had passed through a course in an English engineering college.

72,346. (Sir Theodore Morison.) The longer the period of practical training the better, but students who were getting on in years desired to earn money at the earliest possible moment.

72,347. With regard to the opportunities for practical training which were given to pupils who did not get into Government appointments, all the upper subordinate and engineering students who left the Madras college received a year's practical training, during which time they were paid a maintenance allowance. Those who went into Native States also received the same training.

72,348. Although he would like to see recruitment confined to Indian colleges, he would not absolutely exclude those Indians who had been trained in England.

72,349. (Mr. Chaulal.) There could not be the same facilities in India for learning electrical engineering as there were in England, but it was quite possible to equip Indian colleges to give a good enough training in that subject. There were at present no facilities in the Madras college for teaching telegraphy.

72,350. (Mr. Sly.) Engineering students in the Madras college were charged Rs. 140 a year. That sum was paid by the students themselves. There were for each class division two open Madras Government scholarships, and a third for which Muhammadans, Indian Christians, Eurasians or Europeans had a prior claim and there were a number of students holding scholarships from Native States. The one year's practical training had to be undergone before a student obtained his degree in engineering. The University laid down the condition that the student must have been on works for one year before being admitted to the degree. The Madras college insisted on the student going through a year's practical training under the supervision of Public Works officers of the Madras Government. All the upper subordinates and engineering students were posted to the Public Works Department for one year. The one year's probation which a man had to undergo after leaving the college was in addition to that.

72,351. The student's position on the list at the final examination did not depend on the written test at that examination, but on his work right through the course. There was a separate examination for the University degree. The college course had nothing to

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do with the University except that attendance qualified for admission to the University examinations. The college diploma certified a man for employment.

72,352. (Mr. Madge.) Apart from maintaining a British element, he was desirous of improving the standard of training in India to such a high degree that recruitment would mainly take place in India. He was pretty familiar with the conditions in England, and he saw no reason whatever why the engineering training in India should not be as good as that in England.

72,353. (Mr. Abdur Rahim.) Practically none of the Madras college students were employed on railways. He did not know the reason for that. Several efforts had been made in that direction, but they had all been unsuccessful. No specific reason had been given. The training received at the Madras college would fit a student for theoretical railway work, but he would need a little practical training.

72,354. (Sir Valentine Chirol.) There was very little difference of standard between the one man who was fortunate enough to get into the provincial service, and the best of the others who failed. The students highest up on the list who had just missed the provincial service appointment, usually went to local funds or Native States as assistant engineers. Those on the lower half of the list usually obtained employment in the Public Works Department.

72,355. (Sir Murray Hammick.) The men who went into the local fund employ had received the one year's practical training in the Public Works Department. They went into the local fund as assistant local fund engineers, with a prospect of becoming local fund engineers. That was a career which, in Madras, led to something between Rs. 400 and Rs. 900 a month.

72,356. Students who came from the Native States with scholarships usually applied to the Native States for employment, and they were taken on as opportunity offered. The Native States continually applied to the college for men, but for the higher appointments the students themselves usually put in their applications. Last week he had had an application from a Native State for eight engineers, but there were no men available. If the new scheme which was before the Government of Madras was carried out, and the college was enlarged, there would be ample employment for the increased number of students turned out.

(The witness withdrew.)

At Bombay, Saturday, 21st February, 1914.

PRESENT :

THE RIGHT HON. THE LORD ISLINGTON, G.C.M.G., D.S.O. (Chairman).

THE EARL OF RONALDSHAY, M.P.

SIR MURRAY HAMMICK, K.C.S.I., C.I.E.

SIR THEODORE MORISON, K.C.I.E.

FRANK GEORGE SLY, Esq., C.S.I.

SIR VALENTINE CHIROL.

ABDUR RAHIM, Esq.

WALTER CULLEY MADGE, Esq., C.I.E.

And the following Assistant Commissioners:—

R. J. KENT, Esq., Superintending Engineer,
Bombay.

J. H. ADVANI, Esq., Executive Engineer,
Bombay.

R. R. SCOTT, Esq. (Joint Secretary).

H. F. BEALE, Esq., Chief Engineer and Secretary to Government in the Public Works Department, Bombay.

Written Statement relating to the Public Works Department.

72,362. [NOTE.—When opinions upon controversial matters are expressed in the present memorandum, or preference shown for any particular line of action, it must be understood that I speak for myself, and not as the mouth-piece of Government. I also demonstrate as far as possible the wants of the various sections of our department, and make remarks on them from the point of view of my position in the department.]

72,363. (I.) Methods of recruitment.—In common with many other Engineers I regret the abolition of Coopers Hill as the training establishment in England for the Indian Public Works Department. But I think the Selection Committee at home seems to be doing its work very well on the whole, and the men recruited as Imperial Engineers are nearly all talented and well trained. A weak point in this system of

72,357. (Mr. Bhaskara Ayyar.) The training of the Civil Engineer in India was quite as good as it was in England. It was not possible to obtain experience of irrigation work in England.

72,358. He was not in favour of the direct appointments of passed students from the college to the service; he preferred a period of probation. He did not mean that they should be appointed on probation, but he would select three or four students, make them undergo a period of probation, and then make a final choice from amongst those three or four. His idea was that they should all serve in turn under the same officers.

72,359. With regard to his statement that after the practical training was over, the Chief Engineer and the Principal should select the candidate to be appointed, he did not say anything about the Principal being able to judge a man's fitness during the practical course except from the reports received, but what he did maintain was that the Principal, having known the student for four years, and carefully watched his career during that time, would be in a favourable position to form some opinion as to his ability and character. A pupil's character was not likely to be altered during the period of practical training.

72,360. He meant exactly what he said, when he stated that owing to there having been no tradition in the past leading the higher and more intellectual classes to the study of applied science, it was not quite popular in India. He admitted that there had been engineering works constructed in olden days.

72,361. (Chairman.) His suggestion was that after the completion of the college course the three or four best students should be placed in turn under the same officers in the Public Works Department. He would place each one under an officer, and change them about, so that all four would in turn have been under the same men. The officers would then write reports about each of them, and the Chief Engineer would be able to judge who was the best man. He was not particularly keen about acting as selector with the Chief Engineer, but he would know more about the student than anybody else. The appointment was always in the hands of the Chief Engineer, and not in the hands of the Principal of the college. If two men were equally good, and there was only one vacancy, the claims of the man who was not selected might be considered in the following year.

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Mr. H. F. BEALE.

[Continued.]

think the aid of two or three Public Works Department Engineers, retired or on furlough, would be a very useful addition for the purpose to the Selection Committee.

The *Provincial Establishment* which was sanctioned in 1892, and came into being in 1896, is recruited from the College of Engineering, Poona, one man in each year, and from the ranks of Upper Subordinates one man in every 2nd year. The ultimate strength of the Provincial Service in the Bombay Presidency is supposed to be 30 men. The recruitment is satisfactory, except that it is now felt that Upper Subordinates should be promoted to the Provincial Service, before they have served very long as subordinates. The Public Works Code directs that men should be selected as a rule from the Sub-Engineer grade and only very exceptionally from among the Supervisors. There are various objections to this:—

(i) It is no pecuniary benefit, and may be a loss to a man to be thus promoted.

(ii) He is too old to rise above junior Executive rank, even if he gets as far.

(iii) He has lived himself into the subordinate groove, self and family, and is like a fish out of water in the new circles to which he is then raised: a trial to the men he has to associate with, and too often in a very uncomfortable position himself.

Whereas early promotion is a rapid reward for energy and brilliance, and the man promoted has the best part of his life before him.

As a reward for the senior subordinates (Sub-Engineers) I suggest that a grade of Deputy Engineer be instituted with a rise of Rs. 100 in pay. At present a Sub-Engineer may get Rs. 500 maximum + Rs. 30 Sub-divisional allowance; the Deputy Engineer should get Rs. 600 + Rs. 30.

A third form of recruitment is the appointment of R. E.s. If they are drafted in at the bottom of the department and rise with their Civilian colleagues, there can be no objection to their appointment. If senior men are drafted in, they should not take precedence of men of their own age; but even then it will be a hardship to the juniors unless an increase in the cadre is sanctioned at the same time.

The same argument applies to taking temporary covenanted men on to the permanent establishment. The Secretary of State decided* that such men (duly selected for their efficiency) should be graded one year below the permanent men they came out with, but still such appointments are felt as a hardship by the permanent men, unless there is an increase in the cadre to absorb them.

The general recommendation, therefore, is not to take temporary men on to the permanent establishment; but it would be wrong and inexpedient to make this a hard and fast rule.

72,364. (II.) Systems of training and probation.—At present when a man has had one or two years' practical training in England before selection he is appointed at once as a permanent member of the Department, but if his training has been short he is sent out on probation for a year. I doubt much the value of this probationary period, except perhaps that it makes a man buckle to from the start. A man's character can be gauged during the period, but it is always a difficult and disagreeable task to get rid of an officer (even on probation) unless he is really bad. A stigma must necessarily attach to any such discharge, except on the score of health. The training at home is now principally useful in giving a man an idea of public life and responsibility.

The *Provincial Engineer* appointed from the College in India is differently placed. He is engaged as an Apprentice for a year, and then confirmed, if good. This year is really a period of training and probation in one, and it cannot be abandoned. Of course men from the subordinate ranks are not put on probation when promoted to the Engineer establishment.

72,365. (III.) Conditions of service.—The permanent cadre of the Bombay Public Works Department is insufficient, but an application for increase has been refused by the Government of India (letters attached†). We have 106 permanent and 28 temporary men.

I attach a statement† showing the recruitment year by year from 1880 to 1913. I submit that spasmodic

recruitment, as shown periodically therein and particularly in 1907, 1908 and 1909, is essentially wrong, unless the men are appointed in various ranks, so that they may retire in succession. The Government of India have stated* that uneven recruitment will not produce a block, because they are able to correct any redundancy of officers in one rank by an annual adjustment of the limiting scale. I regret that I do not know how this is done, but hope it may come into use when the men of 1907–1909 rise to the senior grades. At present they are on the annual increment system, but if Executive Engineer charges are not available for them when they reach that rank their increments will have to be withheld. When they have 20 years' service only a few will be accommodated in the administrative ranks, and our department has very few outside appointments indeed to look to.

What the Bombay Government has asked is that we may be allowed to look ahead and commence recruiting steadily at once for an increased cadre. Meanwhile if we want older men to fill up the increased establishment we can appoint them (without injustice) against the greater cadre to be sanctioned and they will retire leaving places for the younger men to fill.

The staff required for construction is always greater than the maintenance establishment. So it must be perfectly safe to work up to the latter limit the moment any project is sanctioned (or even likely to be sanctioned, because recruitment is always very slow and can if necessary be stopped, if it should happen that a promising project is suddenly rejected).

The balance of men required, over and above the sanctioned cadre of permanent officers, must of course be temporary men, but these should not be more numerous than can be helped. The cadre must be constantly checked and revised. If properly done the revision will always take the form of an increase in numbers; if carelessly done there will be fluctuation, sometimes more, sometimes less.

Article 650 of the Civil Service Regulations provides for the compulsory retirement of all permanent Public Works Department officers at 55 years of age. This is a suitable provision. Article 649 provides for the discharge of officers at 50 years, who are not of administrative rank and are considered unfit for it. But a further provision is necessary. It should be possible, without positive cruelty, to discharge at any time men who are incompetent or lazy, and definitely proved to be so by the successive report of three different officers. I think a bonus should be given to them. This bonus might be, for example, $\frac{1}{3}$ to $\frac{2}{3}$ of a contribution Government might make at the rate of 75 per cent. of the deposits of the officer in the Provident Fund. No definite amount should be fixed. This may apply equally to Imperial, Provincial and Temporary Engineers.

With regard to the last it is thought that for two reasons better terms should be offered than at present because

(i) they will attract better men, and

(ii) Government will have some hold over the men.

The following arrangement might be adopted:—The terms already offered to some covenanted men should be offered to all temporary engineers. All the new men have been directed to subscribe 9½ per cent. of their salary to the Provident Fund. Government should add to this half yearly 75 per cent. of the subscription, the sums to earn 3½ or 4 per cent. compound interest.

In case of misdemeanour the Government contribution would be withheld and in case of inefficiency, followed by discharge, the Government contribution might (as explained above) be partially withheld.

In no case should a permanent Engineer be allowed to claim any bonus for voluntary retirement before he has earned his first pension, and after he has earned his pension there will no more be any question of bonuses.

The temporary Engineers desire† that the one month's notice on either side should in future be changed to three months' notice. This is a reasonable request.

72,366. (IV.) Conditions of salary.—The increment scale of salary, introduced in 1908, and modified

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[Continued.]

in 1912 as regards the Provincial* Service, while giving better pay generally, at the same time abolished as usual the exchange compensation allowance.

The cost of living is generally on the rise, and if on this account the pay of other departments is to be increased the Public Works Department should share. That the present scale is by no means high is shown by the fact that Engineers are very much averse from serving in Poona, where they cannot save at all, and in Bombay, where they perforce must run into debt.

There are one or two cases, which require consideration independently of a general increase all round—

(a) The two Chief Engineers who are Secretary and Joint Secretary to Government have to migrate with Government and as heads of their department have to do a great deal of entertainment. They are not like other Secretaries comparatively junior men, about half way up the ladder, looking forward to much higher emoluments, but they are the senior men of the department enjoying, as far as may be possible, what looks on paper like high pay, compared with the men next below them. Their responsibility extends over the whole department in the Bombay Presidency including Sind and Aden. The joint Secretary gets a house allowance in Bombay, the Secretary does not. It is suggested that their pay should be—

Rs. 2,500 as Chief Engineer,

+ Rs. 500 as Head of the department in either branch,

+ Rs. 250 for Joint Secretary's duties, without house allowance.

and + Rs. 500 for Secretary's duties, without house allowance.

Thus the senior man would draw Rs. 3,500 (which is not more than the pay of the Commissioner† of a division in Bombay) and the junior man Rs. 3,250.

(b) The Government of India have already been addressed‡ upon the necessity of granting a Presidency Allowance to the junior Public Works Department officers in Bombay itself, viz., Rs. 250 for Executive and Rs. 150 for Assistant Engineers. It is hoped they will sanction this now, for the reasons given in the Government letter, as it is a very urgent want.

(c) There is an order that an Executive Engineer not holding a district charge should not draw over Rs. 800 (Imperial) or Rs. 535 (Provincial). Unless the officer is unfit for an Executive Engineer's charge this seems an unfair restriction, as the fault is not his that there are no vacancies, and I consider it would be fair to permit him to draw his increments as they become due.

(d) There is an order that if a man is reported unfit for Executive Engineer's charge he should draw the pay of an Assistant Engineer only, i.e., Rs. 750 (Imperial) and Rs. 475 (Provincial). I suggest that he should come under the previous rule that Rs. 800 and Rs. 535 should be the limit but that if he continues to be a good sub-divisional officer he should get two increments at 5 year intervals of Rs. 50 each as compensation for not being promoted to the charge of a district. (A Provincial Executive Engineer debarred from administrative rank is compensated, if he is a good Executive, by an increment of Rs. 50, and I think a second Rs. 50 should be added in his case also.)

At present, the rule as it stands is very unfair indeed upon Provincial Engineers promoted from subordinate rank for special ability, if they are not sufficiently expert to hold charge of a district. Such a case actually exists in our department, and the officer in question draws less than he would have, had he refused the honour of promotion to the Engineer establishment. It is a very great hardship for a man who has done excellent service for the State. He is debarred from rising above Rs. 475, and my suggestion is that he should be drawing Rs. 535, viz., only Rs. 5 more than a Sub-Engineer, 1st Grade, and that he should be allowed two increments at 5-year intervals up to a maximum of Rs. 635. The latter

* For the Imperial Engineers the two periodic increments of Rs. 50 admissible to Executive Engineers, 1st grade, were abolished (Rs. 1,250 maximum), but for Provincial Engineers a special increment of Rs. 50 was sanctioned (850 + 50 = 900) after 5 years if not promoted to administrative rank.

† The pay of Commissioners of Divisions in the Presidency proper is either Rs. 3,000 or Rs. 3,500 per mensem and that of the Commissioner in Sind is Rs. 3,750 per mensem.

‡ Vide Bombay Government Memo.—Appendix No. XVI.

figure, it will be noticed, is only Rs. 5 more than the pay I suggest for Deputy Engineers.

In the matter of pay, I have a representation* from the temporary Engineers that, compared with permanent men occupying the same posts, they should be given 10 per cent. more, because of the precarious tenure of their appointment, and the fact that after some years of work in India they are virtually precluded from obtaining work elsewhere. Also, they request that some further addition should be made to compensate them for earning no pension. They suggest that regular increments should be given on the same basis as for the permanent men, and all their allowances.

The whole demand is a natural one, but I doubt if Government would be well advised to accede to these requests. Temporary Engineers are obtained in the open market; there is no fixed scale of pay for them and there is no particular reason why Government should bind themselves down to give increments. Each man has to be treated on his merits. I think, however, it would be right, and wise, too, if Government were to contribute towards their Provident fund, as already explained under III. (paragraph 72,365). This would meet part of their demand.

Certain Engineers who have been given permanent appointments in the Imperial Establishment, ask† for a reconsideration of their position on the seniority list. They were older, when selected by the Secretary of State, than the usual run of men appointed to the Public Works Department, and they came out on a 5-year covenant, they were all graduates in Engineering, and had 2 to 8 years' training at home. They were made permanent at or before the expiration of their covenant, and were then placed a year or 15 months below the permanent men who commenced their Indian career at the same time, and are thus 3 to 7 years' older than the latter. Their request is to be placed in a position more suited to their age and experience, and they contend that because the incremental system has been introduced, and because the promotion to Superintending Engineer rank is done entirely by selection, no permanent man will suffer any hardship by their advancement. I sympathise with these officers, but must explain that the Government of India pointed out (when the matter was under discussion) that it was a great concession to temporary men to make them permanent. Though these officers were more or less obliged by circumstances to take whatever terms were offered, yet they must realise that when first sent out to India they had already passed the age at which they were eligible for the Indian permanent establishment, and they secured entrance only by virtue of coming out on a short covenant. Again though selection is the rule for the administrative ranks, yet among men nearly equal the senior officer must be chosen, and hardships would result.

72,367. (V.) Conditions of leave.—The leave rules are now being revised by the Government of India, and they will be very much improved. I think no difference should be made between the various Imperial Services; at present there are one or two small differences.

Provincial Engineers come under the Indian Service rules, and these are also being improved.

Temporary Engineers appointed in India may have privilege leave, if no extra expense is incurred thereby. Those who are appointed by the Secretary of State may have privilege leave, and also sick leave up to six months, the latter on half pay, or as a special case, leave as admissible to the Provincial Service.

The temporary Engineers have asked to be brought under European Service rules, and that leave due should be given even after discharge. They also ask for proportional furlough, if discharged before 8 years' employment.

Perhaps some concession may be recommended such as the following:—

For Europe-trained Engineers European leave rules, and for India-trained Engineers Indian leave rules, after three years' continuous service; also privilege leave due up to a limit of three (or six, if the new rule be that) months may be given after discharge, but not furlough.

* Vide Annexure 2, page 173.

† Vide Annexure 3, page 173.

* Vide Government of India, Public Works Department, letter No. 842-E., dated 2nd August, 1906 (Annexure 5 on page 174).

† Vide Bombay Government Memorandum, Appendix XVI.

* Vide Government of India, Public Works Department, letter No. 1463-E., dated 3rd November, 1905 (Annexure 4 on page 174).

† Vide Annexure 4.

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[Continued.]

A most important point is the question of furlough pay. Indian Civil Service and Military Officers in civil employ draw a minimum furlough allowance of £500 or full pay if less, and a maximum of £1,000 a year. The Imperial Engineer begins on about £280, and after 18 years' service is still below £500, while his maximum, viz., £800, is reached in about 30 years.

It is evident, then, that nearly throughout his service he does not draw a living wage while on furlough. The result is that most officers not only absorb their small savings in the short periods of furlough they venture, or are obliged to take (for considerations of health, putting children to school, etc.), but very frequently run into debt. They should be treated like the other Imperial Officers, having like needs.

The Provincial Officers get very much less pay (their furlough allowance is half their salary), and could not be expected to take much home leave, but furlough in India is not expensive. However, they wish naturally in this, as in all other respects, to be placed on a par with the Imperial Engineers.

The Bombay record shows that Indian Officers (both Provincial and Imperial) do not take much furlough as a rule. Of Indian Officers in the Public Works Department twenty have over 10 years' service and eight have over 20 years.

Those who have taken furlough are on the Imperial list; one, with 31 years' service, has had 3½ years' furlough, and four others have had between 1 and 2 years.

Study leave, such as is granted to the Indian Medical Service, would be a useful concession to Public Works Department men. At present they can be put on deputation for a definite purpose, during which they may draw pay at two-thirds of their salary.

72,368. (VI.) Conditions of pension.—The pensions of Engineers are so small that it is difficult to think how retired officers can exist at home. The pension fixed in 1864 was Rs. 5,000, and is still that, but in those days the equivalent was £500, while now, 50 years later, it is £437½.

The pay drawn is too low to permit of appreciable savings, and the small savings are soon eaten up by any furlough that may be taken on the allowances referred to in V. above. At the end of 30 years' service an Engineer without any private means is very badly off, unless he is a bachelor. A married man must make provision for his wife and family, so cannot risk much by insuring for an annuity as an addition to his pension. His Provident Fund, even with 10 per cent. contributions, is at best a comparatively small figure.

In pensions it is the maximum limit imposed which hits the officer. The Civil Service Regulations provide that a man shall get thirty-sixtieths of his pay as pension after 25 years' service or over, but he is limited to Rs. 5,000 as Executive Engineer and Rs. 6,000 as Superintending Engineer. In the first case the calculation would give Rs. 7,500, and in the second Rs. 10,500, so the limits imposed involve a very heavy reduction.

The Imperial Service officers have represented their case to the Government of India and Secretary of State more than once, and only desire to be brought on a par with the other Imperial officers, Civil and Military. For the Provincial Service the pensions are the same as for the Imperial, but it appears that the concession as regards Superintending Engineers' and Chief Engineers' pensions will only be granted under very special condition (Article 636, Civil Service Regulations).

It may be interesting to compare the retirements and casualties between European and Indian officers. Taking the period from 1894 to 1913, 20 years:—

Number of officers who	Europeans.	Indians.
Died while in service ...	17	8
Retired before 55 years of age ...	32*	5
Retired on pension at 55 or over ...	20	6

* Includes 7 resignations before earning a pension.

The retirements of the Europeans before reaching the age limit is a contrast to the Indian figure.

72,369. (VII.) Such limitations as may exist in the employment of non-Europeans and the working

of the existing system of division of services into Imperial and Provincial.—The Bombay Establishment consists of:—

	Imperial Engineers.	Provincial Engineers.	Total.
—	81	25	106
Europeans ...	65	—	65
Indians with English training ...	6	—	6
Indians with Indian training ...	9	22	31
Europeans trained in India ...	1	3	4
Proportion { European	66	3	69
{ Indian	15	22	37

The high proportion of Indians, in the first column, is due to the annual recruitment of 2 men from the College of Science in Poona for some years. A proportion of 10 per cent. Indian Engineers from Europe is sufficient for the present, but should be considered a limit dependent upon thoroughly qualified men being available. This view, however, is not supported by the Imperial Indian members. The point they probably lose sight of is, that in the Provincial Section Government will always have an overwhelming majority of Indians, and when the Provincial Service contains the proposed limit of 30 members, there will still be about 40 Indians in the whole cadre. To claim more than 40 per cent. would be unreasonable, and would involve a serious diminution in the efficiency of our department. I will show separately* how this heavy percentage already handicaps us.

The existing division into Imperial and Provincial seems quite suitable, and now that the men are on the same list for promotion, and the districts are interchangeable, it can in no way be said that the official status of one is lower than the other. In particular I wish to point out that there is no such thing as transfer, much less promotion, from one to the other. The inequality is in training, pay, and conditions of service, but not in status.

The Provincial Service, however, ask for absolute equality in all respects with the Imperial Service. For the same responsibilities and the same duties they want the same pay. They fail to see that the living wage is different for the Indian-born and trained man and for the European whose domicile is not in India. Life (lodging, clothes, food), education, expenditure for leave on account of health, etc., and retirement are all different, and if a definite salary is sufficient for the Indian, it necessarily follows that it is insufficient for the European. This requires no argument or further proof.

The proportion of 2:3 in pay has usually been considered suitable.

If the pay for Provincial establishment is too low, that is, of course, a different question which I do not propose to contest. I think it is too low. The pay of an Assistant Engineer only rises to Rs. 475, which is less than a Sub-Engineer (Rs. 530), and the junior Executive Engineer only gets Rs. 535. I think it should be at least Rs. 635.

72,370. (VIII.) Relations of the service with the Indian Civil Service and other services.—The relations between the Public Works Department and other Services are harmonious and satisfactory.

72,371. (IX.) Any other points within the terms of reference to the Royal Commission not covered by the preceding heads.—The heavy cost of transfers has been referred to by the Imperial representative particularly. Some relief in this respect is wanted. In recent years there has been a tendency to cut down charges very much, and the result is that travelling is generally a source of loss for officers, and transfers invariably mean a heavy tax on their private purse.

It often occurs that in the interests of Government an officer is transferred several times at comparatively short intervals; the result is very disheartening, as he is bound to lose either by selling his effects or by moving them at greater cost than he can claim from Government.

* Vide paragraph 72, 373.

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[Continued.]

My opinion is that Government would be well advised to err, if at all, on the side of liberality. The removal for example of a vexatious order in connection with return railway fares, has been a move in the right direction, simplifying work and control, and avoiding discouragement.

72,372. ANNEXURES.

ANNEXURE 1.

Record of entrants into the permanent Engineer Establishment since 1880.

Year.	Europeans from Eng- land.	Indians from England.	Europeans from Indian Colleges.	Indians from Indian Colleges.	Transferred from other Govern- ments, &c.		Promoted from Upper Subordinate establish- ment.		Total.
					Euro- peads.	Indians.	Euro- peans.	Indians.	
1880	7	—	—	1	4	—	1	13	
1881	8	—	—	1	2	—	—	11	
1882	7	1	—	—	2	—	—	10	
1883	3	—	—	1	—	—	—	4	
1884	1	—	—	1	1	—	—	3	
1885	2	—	—	1	—	—	—	3	
1886	3	—	—	1	—	—	—	4	
1887	2	—	—	1	—	—	—	3	
1888	1	—	—	2	—	—	—	3	
1889	1	—	—	2	—	—	—	3	
1890	—	1	—	2	—	—	—	3	
1891	3	—	1	1	—	—	—	5	
1892	2	—	—	1	1	—	—	4	
1893	3	—	—	1	1	—	—	4	
1894	1	—	—	1	—	—	—	2	
1895	2	—	—	2	—	—	—	4	
1896	2	—	—	1	—	—	—	3	
1897	2	1	—	1	—	1	—	5	
1898	1	—	—	1	—	—	—	2	
1899	4	—	—	1	—	1	—	6	
1900	2	—	—	1	—	—	—	3	
1901	2	—	—	1	—	1	—	4	
1902	3	—	—	1	—	—	—	4	
1903	3	—	—	1	—	—	1	5	
1904	4	—	—	1	—	—	—	5	
1905	6	1	—	1	—	1	—	9	
1906	3	1	—	1	—	—	—	5	
1907	9*	1	—	1	—	—	1	12	
1908	(7+2) 9*	—	—	1	—	—	—	9	
1909	(6+2) 8†	—	—	1	2	—	1	10	
1910	(5+1) 6	—	—	1	—	—	—	5	
1911	4	—	—	1	—	—	—	4	
1912	1	1	—	1	—	—	1	3	
1913	2	—	—	1	—	—	—	3	
1913	3	—	—	1	—	—	1	5	

* Two of these are from covenanted temporary engineers.
† One of these is from covenanted temporary engineers.

ANNEXURE 2.

Note by the Committee of Temporary Engineers, Bombay Presidency, dated 5th December, 1913, on the references contained in Government letter No. E-12052 of November 29th, 1913.

1. *Methods of Recruitment.*—No special point.
2. *Systems of Training and Probation.*—No special point.

3. *Conditions of Service.*—A. In considering the conditions of service of temporary Engineers it should be borne in mind that temporary service with Government for an extended period limits the field of all Engineers' subsequent employment and practically confines it to India.

B. In view of the difficulty of finding situations in this country and with a view to lessening the feeling of insecurity which makes the work of a temporary Engineer more exacting and arduous than that of a permanent man, three months' notice to be given by either side to terminate employment instead of one month as at present.

C. Vacancies in the permanent cadre should be filled as far as possible by suitable temporary Engineers.

4. *Conditions of Salary.*—(a) Owing to the conditions of service and the fact that his employment is temporary and frequently made for emergent necessi-

ties of Government, the scale of pay should be on a more generous basis than that of permanent men of similar rank.

It is suggested that a temporary Engineer should receive 10 per cent. more than the salary which would be paid to a permanent man occupying a similar post.

(b) The pay of a temporary Engineer during the period of his employment by Government should be incremental on the same basis as that of a permanent officer.

(c) As a temporary Engineer is not eligible for pension his salary should be on a still higher basis in addition to paragraph (a) to enable him to insure for a pension or contribute to a Provident Fund.

(d) Temporary Engineers should draw all allowances sanctioned for permanent men.

5. *Conditions of Leave.*—These should be identical with those of the Imperial permanent service, but having regard to the temporary nature of his service the rules should be modified so that they do not militate against him adversely.

For instance, if his services are dispensed with he should be granted any leave that may be due to him. Further he should be entitled to furlough per year of service in the event of his employment terminating before he has served the full period qualifying him for furlough under the European leave regulation.

6. *Conditions of Pension.*—(a) A temporary Engineer cannot earn a pension owing to the nature of his service.

(b) It is strongly held that a Provident Fund with a subscription by Government should be instituted for all temporary Engineers on the following lines:—

The monthly subscription to be 12½ per cent. (e.g., 2 annas in the rupee) of the salary and Government to contribute a further 75 per cent. on the amount monthly.

The whole to accumulate at 4 per cent. compound interest calculated monthly.

7. *Such limitations as may exist in the employment of non-Europeans, and the working of the existing system of division of services into Imperial and Provincial.*—No special point.

8. *Relations of the service with the Indian Civil Service and other services.*—No special points.

9. *Any other points.*—It would be greatly to the advantage of Government that temporary Engineers who are specialists should have special consideration in respect of pay and leave on deputation to enable them to keep up-to-date in the advances of their professions.

ANNEXURE 3.

Memorandum from Imperial Engineers serving in the Bombay Public Works Department who were appointed to the Permanent Establishment after serving under covenant for five years on the Temporary Establishment.

(1) Appointment as Temporary Engineers:—
(a) These Engineers were appointed in England by the Secretary of State for India as Temporary Engineers on a five years' Covenant after selection by a Committee at the India Office. They were selected on the strength of their Engineering training and on their approved practical experience from a large number of applicants.

(b) The ages of these Engineers on appointment varied from 24 to 28 and all hold Engineering degrees. Their practical experience in Great Britain varied from two years to eight years.

(2) Appointment as Engineers on the Permanent Establishment:—

From the Temporary Engineers so appointed, a certain number were selected and appointed to the Permanent Establishment, before or at the completion of their five years' agreements.

(3) Terms of appointment:—

The terms of the appointment were that their whole service on the Temporary Establishment was to count towards leave and pension but for purposes of promotion and seniority instead of counting full service, from 1 year to 15 months were deducted.

This latter condition meant that these Engineers who, even at the time of their appointment, were

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[Continued.]

considerably older and more experienced than Engineers appointed at the same date directly to the Permanent Establishment are in the seniority list one year or more below them.

(b) In some cases as much as 18 places are lost by this condition and the result is that they are placed on the seniority list below Engineers 2 to 8 years their junior, which, apart from the pecuniary loss involved, places them in positions which are at times embarrassing and undignified.

(c) In the case of the last appointments which were made shortly before the closing of the R. I. E. College, the deduction of 15 months from their service places them below men appointed to the Permanent Establishment, after the closing of that College.

These Engineers had the same training as those appointed from the Temporary Establishment but they are considerably younger and their practical experience was much less.

(4) It is pointed out that Engineers who leave appointment in Great Britain at ages varying from 24 to 28 and serve for five years in India are placed at a very serious disadvantage when they return home and apply for appointment, as it is between the ages of 25 to 30 that an Engineer, as a rule, becomes settled in his profession. These officers were, therefore, practically compelled to accept any terms which were offered.

(5) Attention is also invited to the fact that all the Engineers, appointed from the Temporary Establishment, are Executive Engineers or will be acting as such very shortly and that therefore if the concessions asked for are granted, it will not be in any way to the detriment of officers appointed direct to the Permanent Establishment, now or later, as it has been clearly laid down that appointment to the Administrative grades shall be by selection.

(6) They request that the Commission will consider their case and recommend that they may be allowed to count at least their full services, as Temporary Engineers, towards seniority and increment and further that due consideration may be given to their ages and previous approved experience at home, when determining their seniority, as has been done in at least one case in another Presidency where for purpose of counting promotion and seniority, at least two years were added to the officer's services on the Temporary Establishment.

ANNEXURE 4.

No. 1463-E.

GOVERNMENT OF INDIA. PUBLIC WORKS DEPARTMENT.
Establishments.

From MR. L. M. JACOB, C.S.I., Secretary to the Government of India, Public Works Department; to the SECRETARY to the GOVERNMENT of BOMBAY, Public Works Department.

Simla, the 3rd November, 1905.

SIR,

I am directed to acknowledge the receipt of your letter and telegram noted in the footnote* on the subject of the permanent appointment to the Department of Messrs. R. W. Murphy and C. Johnston, Temporary Engineers under covenant with the Secretary of State.

2. In reply I am to point out that the proposal made in paragraph 2 of your letter under reply that such men on being made permanent should be graded as supernumeraries in the Department is an unusual one. Many Temporary Engineers have been brought on to the permanent establishment in various provinces from time to time, and the invariable rule has been to accord them a position in the regular list which would be fair to them in consideration of their age and length of service, and the Government of India would suggest that the same plan should be followed in the case of these Temporary Engineers in Bombay whom it is desired to bring on to the permanent establishment.

3. I am to explain that under the system of promotion at present in force as governed by the rules in paragraph 62 of the Public Works Department Code, the Government of India are in a position by a proper adjustment of the limiting scale to regulate the rate of promotion in the different cadres to correspond as nearly as possible with the limit of time laid down as reasonable for promotion to the various grades, so that there can at no time be a serious block of promotion in any of the Executive and Assistant grades. This, in fact, they do; the limiting scales being revised each year, and if it is seen that a block in any grade is likely to occur, the limiting scale being adjusted to remove it. This being so the Government of India are of opinion that there is very little hardship, if any, to the permanent staff in bringing in a Temporary Engineer into the permanent Establishment otherwise than at the bottom of the list since the disturbance of the list can be remedied at the next annual revision of the scale. It is true that the introduction in this manner of additional officers into the scale may ultimately result in a slightly larger number of Executive Engineers, 1st Grade, at a given time than would otherwise be the case and so diminish to some extent the chances of promotion to administrative rank, but the retardation of promotion due to this cause would in any case be very slight. I am, therefore, to suggest that the proposal of the Government of Bombay in regard to Messrs. Murphy and Johnston may, with the consent of His Excellency the Governor in Council, be reconsidered in the light of the above remarks.

I have, &c.

(Sd.) E. G. STANLEY,

Under Secretary to the Government of India.

Documents Accompanying :—
Nil.

ANNEXURE 5.

No. 842-E.

GOVERNMENT OF INDIA. PUBLIC WORKS DEPARTMENT.
Establishments.

From MR. L. M. JACOB, C.S.I., Secretary to the Government of India, Public Works Department; to the SECRETARY to the GOVERNMENT of BOMBAY, Public Works Department.

Simla, the 2nd August, 1906.

SIR,

With reference to correspondence ending with your letter No. E.—488, dated 23rd February, 1906, I am directed to state that, on the recommendation of the Government of India, the Secretary of State for India has been pleased to sanction the appointment of Messrs. R. W. Murphy and C. Johnston, covenanted Temporary Engineers to the permanent Engineer Establishment of the Public Works Department in Bombay on the following terms:—

I. They will be granted the Imperial rates of pay.
II. Mr. Murphy will be appointed Assistant Engineer, 2nd Grade, and Mr. Johnston, Assistant Engineer, 3rd Grade.

III. They will come under the leave and pension rules applicable to officers now appointed to the Public Works Department in England.

IV. They will be allowed to count service for purposes of leave and pension from 5th January, 1901 and 12th December, 1902 respectively, the dates on which their services as covenanted Engineers commenced.

V. They will be allowed to count service for purposes of promotion from 5th January, 1902 and 12th December 1903 respectively.

VI. They will be allowed exchange compensation allowance while serving in the Assistant and Executive grades only.

2. I am to request that permanent appointment in the Department on the above terms, may now be offered to Messrs. Murphy and Johnston and on their acceptance being intimated to the Government of India the usual notification appointing them per-

* Letter No. E.—2128, dated 18th August, 1905 } not
Telegram No. 373 T., dated 24th October, 1905 } reprinted.

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[Continued.]

manently to the Public Works Department will be issued.

3. It will be observed that under item V of the terms Messrs. Murphy and Johnston are to count service for purposes of promotion from 5th January, 1902 and 12th December, 1903 respectively instead of from 5th January, 1901 and 12th December, 1902 as originally proposed. This alteration, I am to say, has been made at the suggestion of the Secretary of State and has been adopted in the case of other covenanted Temporary Engineers recently appointed to the permanent establishment in the Punjab, in order to maintain the seniority of their contemporaries who were appointed permanently to the Department:

I have, &c.,
(Sd.) F. C. DOVER,

Offg. Under-Secretary to the Government of India.

72,373. Supplementary Confidential Written Statement by Mr. H. F. Beale.*

THE VALUE OF THE INDIAN.

The reports from the Department are as follows:—

(a) the Europeans report adversely upon the Indian for independent, responsible positions, and favourably for positions where he will be under guidance;

(b) the Indians extol the ability of their own men. I may quote Mr. Chitale, a very senior Executive Engineer, who was tried but found unfit for administrative duties. He writes:—"The good points of the Indian Engineers are their continuous hard work, steady habits, general intelligence, close supervision of, and co-operation with, the subordinates under them, which are necessary qualifications for getting the work done cheaply and preventing frauds. They are, however, yet looked upon with suspicion and their good points are not often brought out."

Our effort is to get the best we can for Government out of the department. If we appoint a Superintending Engineer and he submits papers from his Executive Engineers "for disposal," or "agreeing" or making some remarks which any man might do from his chair, we call him a post office. I may instance a recent case in which a Superintending Engineer forwarded "for early orders" suggestions made by a contractor for the foundations of an important work without any comment whatever. All kinds of mistakes will pass an officer of that kind, and one will never look to him for an exhaustive report or for the expression of an opinion of value.

This is rather the type of Indian we have had as Superintending Engineer, but there have been two or three notable exceptions.

As a subordinate and an Assistant Engineer even, the Indian is quite good.

Under a zealous officer he will work well, and having a guide he moves on with confidence.

As an Executive Engineer he has the following advantages:—

(a) knowledge of the people, language, and country, excepting Sind;

Mr. H. F. BEALE, called and examined.

72,374. (Chairman.) The witness was Chief Engineer and Secretary to the Government of Bombay, and had held his present post since October, 1912. He joined the service in October, 1882.

72,375. He suggested that certain senior members of the Public Works Department should be added to the committee of selection in England to assist the committee in discovering the class of candidate best suited for India. They might be officers of the service on furlough or men who had just retired from the service.

72,376. Recruitment to the Provincial Service was generally satisfactory, but upper subordinates should be promoted to the Provincial Service at an earlier age. At present the promoted men were nearly always sub-engineers of about fifteen years' service, whereas

* Mr. Beale was examined upon this written statement in camera.

(b) the confidence of the people, if he is a straightforward and friendly man;

and he should be able to make good use of the experience gained as a sub-divisional officer, but he has certain disadvantages, viz.:—

(c) he lacks prestige, unless his training enables him to hold his own in any society;

(d) his independence in public duties is interfered with by family ties;

(e) a fear of local unpopularity will affect him very much, while a European would hardly be aware of it;

(f) caste prejudices which often make him favour the higher caste men in preference to the lower;

(g) he may be subjected to temptation in places where the inborn feeling of the people is that a private remuneration must precede all useful effort, especially in the case of large contracts or special appointments: such temptations are seldom put before Europeans, because of the futility of the offer or of the physical danger involved in the process.

Then in a general way (it must always be understood that there are many exceptions) the Indian is not able to bear exposure better than, and often not as well as, the European, or perhaps it is that the latter spares himself less; the Indian seems less keen about details of work and supervision, and he has a known disinclination or disability for manual work, hence lacks some useful experience.

The Indian may be described as capable of good work, having mental ability and shrewdness and often great keenness for his duties, but as wanting in self-reliance, vigour of effort and of management, and of reliability. He is also apt to be very partisan or excessively lenient in his reports. An unfortunate and very great disadvantage he has (and it is only a few who can get over this) is his social disability. The caste system begins by making him exclusive, so he does not readily learn how to consort with officers of his own and other services. Thus he naturally tends to avoid them, is little known, and not as popular as he would otherwise be.

This feature reduces the level of our Public Works Department very materially. It is easy to mention numerous other Indian gentlemen who are very well received in society, having a good appearance and good address. If all our officers were to cultivate a higher social refinement it would be a very great advantage both to themselves and to the Department as a whole, and mutual intercourse with their fellows of all creeds and castes would help them in their every day life and work.

There is, I believe, too great a tendency for men, who do not consort with their equals in rank, to hobnob with subordinates, which after all is only natural, as they were probably all brought up together, but it impairs discipline and certainly lowers very much indeed the prestige of the Department.

The objection to Indian Engineers in Sind is most marked. The Zamindars dislike them, and can for some reason or other not feel for them a due respect, even for a good, earnest, and active officer. The Brahmin is absolutely out of his element in Sind, and the other Indian gentlemen recruited in our Department have not the manner which the Sindhi Zamindar admires.

he would prefer to promote them after eight years' service. The fact that they were placed over the heads of others in the service would not cause friction.

72,377. Recruits from the Royal Engineers were occasionally taken into the department, and two young officers had been appointed within the last two or three years. They took their seniority according to the date on which they entered and came in at the bottom of the list. Provided a Royal Engineer was recruited to the Public Works Department fairly young, there was no hardship to him or to the service. As a rule, a Royal Engineer had two or three years' service before coming into the department.

72,378. The last temporary engineers to be made permanent were two officers in 1911. There were twenty temporary engineers in the department, and ten in special posts. Two or three more appointments

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would be made shortly. Although temporary engineers were recruited for certain constructional work, their services were not dispensed with when that work was completed, as constructional work was continually going on. No distinction was made between men employed on constructional work and on maintenance work, and officers might be transferred from one class of work to the other at any time. Probably next year another ten temporary engineers would be entered on account of additional work. The additional men were required in the junior grades, not in the executive grades, but the Government of India would not allow the increase of cadre of permanent men to be brought in when applied for on the ground that if too many men were put in the junior grades the senior men would suffer. Amongst the temporary engineers now in the department there were seven with more than five years' seniority, five with more than ten years, and one with more than fifteen years. He was not in favour of transferring those particular men to the permanent cadre.

72,379. Practical training in England gave men some idea of engineering life after their career as students, but was not otherwise of very great value. If a man had less than a year's experience in England he was entered as a probationer in India, but in the case of those who had had several years' experience, probation was dispensed with. The rule as to probation had only been in force for the last two years.

72,380. An increase in the cadre was necessary both for maintenance and construction work. As a rule permanent men were employed on construction work, and temporary men were employed on maintenance work. At present there was a good deal of building construction going on and a large amount of irrigation work; there were two very large projects in irrigation, and a third was about to be sanctioned, and when the Sukkur scheme began a vast increase in the number of engineers would be required.

72,381. If constructional work were carried out by private firms it would mean a reduction of the establishment, and the Government would have great difficulty in finding men to do the work which came within the range of the department. It would be quite possible to have work done by a private contractor, even irrigation work, but it would not pay the State to reduce the permanent establishment of the department. The cost of work by private contract would be probably in excess of the cost of work done by the department. Also there was a large amount of miscellaneous work; an Executive Engineer in charge of a district had to work out all kinds of problems while he was engaged in constructing large buildings. Looking at the question broadly, however, it would be undoubtedly of advantage to the country to have work done by private enterprise if it could be done sufficiently well.

72,382. In describing as unfair the order that an Executive Engineer not holding a district charge should not draw more than Rs. 800 in the Imperial or Rs. 535 in the Provincial Service, he was assuming that an engineer was an efficient engineer, and that for the moment an executive charge was not vacant. It did not seem fair that a man should suffer because the department had been over-recruited, and if a man could not receive an appointment he should receive his increments of salary just the same. The conditions were quite different in respect of temporary engineers, as a temporary engineer could be always on the look-out for other employment. He took work in India for a time and gained his experience, and then he could go to any other part of the world at his own price. There was no reason whatever why he should have a constant increment. In practice he remained in the department, but that was simply because he obtained better terms than he could obtain elsewhere.

72,383. No reply had been received from the Government of India with regard to the proposal to grant presidency allowances. The Superintending Engineer in Bombay should also be granted an allowance, in addition to his present salary, otherwise there was just the possibility of an Executive Engineer getting as much pay as a Superintending Engineer. That in itself, he admitted, was not a very strong argument, but he maintained that the Superintending Engineer, whose headquarters were in Bombay, was worse off

than the other Superintending Engineers, and should receive a Presidency allowance.

72,384. He did not object to the 10 per cent. rule for the appointment of Indians in England, as he believed that Indians with sufficient enterprise to go to England to study should have their reward. It was not essential that an Indian Engineer should have an English training so long as the service was divided into Imperial and Provincial branches. He had been told that if the title of Provincial was abolished, and the difference in pay was retained in the shape of a foreign service allowance, the discontent would to a very great extent be allayed. There was a feeling amongst Provincial officers that they were considered of lower rank than Imperial officers, and if that was the construction put upon the term Provincial it should be abolished.

72,385. There was no difficulty in obtaining recruits to the provincial service on the present salaries, but it was said that the salaries were insufficient. A junior Executive Engineer on Rs. 535 was on a very low rate of pay having regard to his responsible position, and the salaries of the Provincial branch of the Public Works Department did not compare favourably with the salaries of other Provincial services.

72,386. It was very important that increased transfer allowances should be granted, as officers now had to spend money out of their own pockets invariably when they were transferred from one district to another.

72,387. (Lord Ronaldshay.) He did not say that all Royal Engineers would come in at the bottom of the list. The two men recently appointed had come in at the bottom. If a senior Royal Engineer were brought into the department he should come in with an increase in the cadre, and then there would be no friction.

72,388. If work was done by private contract it would be still necessary to have an Executive Engineer in charge of every district and subordinates in charge of sub-divisions.

72,389. The pay given to a European engineer was based both on the expense of his training and the conditions of service in a foreign country, and did not necessarily imply that his services were more efficient than a provincial engineer.

72,390. In the Bombay presidency a considerable number of temporary engineers were employed in charge of sub-divisions, chiefly owing to the fact that the subordinate establishment was under-manned. If the subordinate establishment was brought up to a proper strength and the training of the officers was improved, it would be possible to draw the sub-divisional officers from the subordinate establishment and thus to reduce greatly the number of temporary engineers.

72,391. (Sir Theodore Morison.) In estimating the cost of work the department did not take into account non-effective charges of the establishment, but the effective charges were calculated and added to the cost of the work.

72,392. (Mr. Sly.) The system followed in the Bombay presidency for the construction of large works was generally a system of petty contracts and departmental labour, but constructional work was also given to local contractors. Work was done in three different ways: it was given to large contractors, or divided up into petty contracts, or done by departmental labour. There was a large number of reliable contracting firms in Bombay city and a great deal of the construction work in the city was done by them, but he did not think the State would gain if the whole of the work was done by contract. The establishment maintained in Bombay city was large enough to undertake direct construction on a large scale, and if constructional work was put out to contract the establishment would be very largely decreased. It would not be a wise thing to do this as it was always necessary to have something to put up against contractors.

72,393. There were reliable firms of local contractors in the districts who were quite able to take up large jobs of work. The maintenance of works and repairs could not be carried out by contractors and an establishment would have to be maintained for that.

72,394. The Provincial service recruited one candidate every year from the Poona college and one pro-

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[Continued.]

moted subordinate every other year. As a rule the promoted subordinate was an old man who had been in the subordinate service for over fifteen years and was not a suitable man for the Provincial service. It would be better to select a young man from the subordinate service, as he would be trained in exactly the same manner as the direct recruits coming from the same college and sometimes being only a few marks lower in the examination than the Provincial recruit. The fact that one had four years in the college and the other three made no difference to the class from which they came. The man who spent another year at the college only did so in order to have a better chance of getting the appointment.

72,395. He did not favour a central college for all India for training provincial service men. The college at Poona was very efficient and was being improved year by year and it would be a great pity to reduce its value.

72,396. Admission to the Provincial service was not restricted to statutory natives of India, as any man who entered the college had a right to be appointed to the service. He did not think, however, that a European would come out to India and enter the Poona college with the object of getting into the Provincial service.

72,397. If an officer in the Provincial service was sent to England for one year's training in practical work it would be desirable that he should go after about five years' experience of Engineering work in India.

72,398. Probably it would be true to say that a temporary engineer after having been employed for a certain number of years in India would have little chance of work in England, but he would still be valuable for service in other parts of the world, even for irrigation work. There was a good deal of irrigation work in Canada, for example.

72,399. (Mr. Madge.) The men who were selected for the Provincial service came from the same class as those who were in the upper subordinate service, but a man promoted from the subordinate service to the provincial might be out of his element owing to the long time he had spent in the subordinate service.

72,400. The time had not come to make over the whole work of the Public Works Department to private enterprise. He agreed that private enterprise should be encouraged and that local contractors should be employed to a great extent; in fact, they were freely employed and always would be employed.

72,401. If the cadre were increased in the proportion that had been asked for there would be an excess of Assistant Engineers compared with officers in the superior ranks.

72,402. The objection to bringing temporary engineers into the cadre after approved service was that they could only do so to the prejudice of officers belonging to the permanent staff.

72,403. He wanted power to discharge a man for inefficiency at any time and he did not believe that this would be detrimental to recruitment. It would be of great advantage to have the power, and if the discharged man was given a bonus he would not be hardly dealt with. There had been cases in which men had been found to be inefficient long after they had completed their probation.

72,404. (Mr. Abdul Rahim.) He did not wish any special inference to be drawn from the figures given in the written statement as to the number of European and Indian officers who died or retired. The figures showed that a large number of Europeans had retired before fifty-five years of age as they had the option to do so. The Indians, however, had no such option and that might explain the difference in the figures. He had not meant to compare Europeans with Indians, but only put the table forward as interesting in connection with the pension question. He had not brought out in the written statement all the facts which might be deducted from the table.

72,405. (Sir Valentine Chirol.) To give out the whole of a contract including both the design and execution of the work, and to leave the department simply to act as clerk of works, would be to alter the whole of the present system. The designing of works was all done in the department,—with the aid of consulting architects and other specialists when

necessary. It might be that the works already designed had not been so successful as to justify the claim of the department to a monopoly of design, but he thought if the designing of buildings was left to private contracts the country would in many cases suffer greatly. The duty would then fall upon the Department of criticising the designs, and possibly of making out fresh designs. If the door were opened to large contractors, there would be a number of firms to select from, and the Department was already using local contracts to a large extent. The experience of the Department had been that they could do large works at present more cheaply than English contractors could do them, but he could give no definite figures, as tenders had not been invited for recent large works. It might be advisable gradually to extend the system of putting large works out to contract so as to see whether work could not be more efficiently and more cheaply carried out by private enterprise, and the encouragement given to contractors might be desirable in the interests of the country.

72,406. All Provincial service men were drawn from the College of Engineering in Poona. The first man in the examination received an appointment in the Provincial service and the others went into the upper subordinate service. He did not want to increase the number of subordinates promoted to the Provincial service; at present one man was promoted every second year and that seemed quite sufficient. With a larger number of subordinates in the subordinate service it might be possible to dispense with the recruitment of temporary engineers, but he would not increase the proportion of subordinates promoted to the Provincial service.

72,407. (Sir Murray Hammick.) A number of officers had retired before attaining the age of fifty-five, but he could not remember a single case where an officer had retired on the completion of twenty years' service.

72,408. The department had never given out large constructional work to a London firm, but probably would do so if it promised to be more economical. Large buildings were given out to local contractors and every bit of the work was supervised by the department. There would be no difficulty whatever in making contracts with private firms. Even if that were done it would not allow the staff of the department to be reduced to any great extent in the districts. On the Sukkur scheme there would be a large number of Executive Engineers, Assistant Engineers and subordinates, and it would be possible to reduce their number by 50 per cent. if the work was given to a large contractor. No consideration had been given to the question of reducing the establishment in that way.

72,409. He had heard it said that Provincial officers were every bit as good as Imperial officers. He knew of certain cases where men had gone to England from the Poona College and after a period of training in England had got into the Imperial service, and obviously these were better trained men than the men who were trained in India only.

72,410. The agreements with temporary engineers appointed in India were renewed every year, so that they knew exactly the terms upon which they were employed, and they could leave at a month's notice. The distinction between an officer who had not reached executive rank and the engineer in private employment was that the latter could go off to another firm, while the former could not leave Government service, and he had that in mind when he said that an Assistant Engineer had a claim for something more than Rs. 800 if he was efficient.

72,411. (Mr. Kent.) There were reliable contractors who could undertake construction work but were not able to prepare plans and estimates.

72,412. He attached considerable importance to the *esprit de corps* which life at such an institution as Cooper's Hill fostered.

72,413. It would be quite possible by means of a central institution in England to arrange a curriculum to suit Indian conditions, and a central institution would be preferable to a large number of individual institutions which could not give the necessary special training.

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72,414. The system by which an engineer obtained an appointment after a series of examinations spread over a long period was a better test of a man's ability than a single examination.

72,415. The provincial executive engineer was allowed one increment of Rs. 50 after he reached the ordinary maximum, but he thought two increments should be given, and correspondingly two should be given to Imperial engineers who were debarred from becoming Superintending Engineers but were efficient officers.

72,416. Travelling allowances were insufficient and a more suitable arrangement would be to provide a permanent travelling allowance as was done in some other services. He would give the allowance to the Executive Engineer of Bombay although he did not move outside the city. In certain cases stationary men might be given a smaller travelling allowance. Motor cars should be given to officers in places like Bombay and it would be also a sound thing to supply motor cars to men in the mofussil.

72,417. Transfers even in the districts cost more than the allowance given. Officers should be paid their actual expenses in all cases of transfers, but if Government prescribed any limit they should fix a certain allowance of trucks by rail and a certain number of carts by road. An officer suffered loss in every case of transfer, especially if the transfer was to a distant place. One officer who had been transferred from Poona to Nagar had been out of pocket to the extent of Rs. 250. When an officer was transferred during furlough he received no allowance to enable him to join his new appointment, and the witness suggested that the same allowances should be given in such cases as for other transfers.

72,418. No facilities were given to young officers to learn the Vernacular although they had to pass a language examination within two years of their arrival. It was in the interests of Government that all officers should learn the language as soon as possible and for that purpose new arrivals should be sent to Bombay, Poona or Karachi for three months to learn the language under a trained Government teacher, not the ordinary munshi or pundit of the country.

72,419. (Mr. Advani.) It was not possible for any selection committee in England to gauge the tact and qualifications of candidates in the management of men or to examine into their manners and temper, but he was not in favour of a probationary period in India on that account. It was not easy to get rid of a man merely because he had a bad temper. He believed that an officer who was appointed to the selection committee for the purpose of aiding the committee in selecting the best men for India would not be influenced or biased in any way by personal feeling.

72,420. The previous Public Services Commission had recommended increased recruitment from India for the Public Works Department, but there had really been a reduction. In those days the College of Science at Poona supplied two recruits a year and it was found that the number of Indian trained engineers was becoming excessive and a request was made that only one engineer should be appointed each year; that was agreed to by the Government of India and the Poona recruitment was reduced from two to one.

72,421. It was probably true that the term provincial had come into disrepute on account of the difference in pay and if the difference in pay was maintained the discontent might still continue.

72,422. The Presidency engineer received extra remuneration as a member of the Improvement Trust to compensate him for his extra work, and not for the higher cost of living in Bombay.

72,423. It was necessary for a district Provincial officer to keep up the same status as an Imperial engineer, but he could not say whether or not he could do so on the present scale of pay. Certainly in the junior ranks of the Provincial service the pay was too low.

The following evidence of this witness was taken in camera.

72,424. (Mr. Abdur Rahim.) The remark in his confidential written statement that "Europeans

(The witness withdrew.)

report adversely upon the Indian for independent, responsible positions, and favourably for positions where he will be under guidance," was true in almost every case. In order to avoid any misapprehension he wished to point out that this observation and that expressing the Indian opinion quoting Mr. Chitale's remark was preceded by the remark "The reports from the department are as follows:", which meant that questions had been recently put to the officers of the department and that it was their reports he was quoting. The department consisted of a certain number of officers, Europeans and Indians, and each of them had expressed his opinion for the information of the Commission. The reports referred to were not reports taken from the records in the department. Reports were made to the departments from time to time about the work of different officers, but it was not those reports to which he was referring.

72,425. Mr. Chitale was found unfit for administrative duties, and it was open to the Commission to ask for information with regard to European officers who had been passed over or found unsuitable. He had mentioned Mr. Chitale in particular simply because he had quoted his actual words. Elsewhere he had stated that there were some very good Indian officers who were notable exceptions, and by "notable exceptions" he meant notably good officers and not notable exceptions proving the rule with regard to other Indians.

72,426. With regard to the statement that Indians as a rule did not express opinions, he had in mind certain cases and if those cases were asked for by the Commission he would put them forward. It was true there might be similar cases in connection with Europeans, but he was referring to officers who habitually refrained from expressing their views. It was open in such cases for the head of the department to send the file back and ask for an opinion, but that was not done in one of the cases he had in mind. He was quite prepared to establish before the Commission that Indians habitually did not express their opinions.

72,427. He had not compared the number of European officers who sent up cases without a report with the number of Indians, but he could not recall a single European case. He did not search for such cases; they came before him in the course of his daily work.

72,428. The remark in the written statement as to an officer lacking prestige unless his training enabled him to hold his own in any society referred both to European and educated Indian society. It was very difficult to specify instances without hurting people's feelings, but he could do so in cruder language if the Commission required definite information on the subject.

72,429. The remark that "the Indian officer's independence in public duties is interfered with by his family ties" was based on the known fact that the family ties of a man in India interfered very much with his work. In (g) of paragraph 72,373 he intended to point out that an Indian officer was very much more likely to be tempted than a European officer, but of course if he withstood the temptation no harm was done. He was not prepared to give any case of a man taking a bribe.

72,430. The Zemindars referred to in the last paragraph of his confidential note were mostly Mohammedans and probably of the same class as the Zamindars in the Punjab.

* The witness afterwards wrote:—

"In explanation of this answer I wish to state that although my service as Chief Engineer and Secretary to Government in Bombay dates from October, 1912 (1 year and 5 months only as remarked by Mr. Rahim) yet I was Chief Engineer in Sind from April 1912, and I have held administrative rank as Superintending Engineer since May 1901, i.e., close on 13 years. It will be conceded therefore that my experience of the classes of men in the department as Executive and Assistants is a long one. I state that the average Indian officer (even including those who have been trained at home) is not as good as the average European in permanent employ. At the present moment we have on our list three Indians and one European who have been passed over for the rank of Superintending Engineer.

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Mr. V. T. AGASHE.

V. T. AGASHE, Esq., late Sanitary Engineer to the Government of Bombay.

Written statement relating to the Public Works Department.

72,431. **INTRODUCTORY.**—I am a Poona College Engineer with nearly 24 years service, and appear as a representative witness on behalf of Indian Engineers of the Imperial Service in the Bombay Presidency. I shall touch upon those points only wherever the interests of the Indian College Engineers differ from those of the Imperial Engineers recruited from England. In other respects, I may be assumed to subscribe to the Memorandum prepared by Mr. Harrison, who represents the Bombay Imperial Service Engineers recruited from England.

(2) I may mention at the outset that the Indian Imperial Engineers would have one Indian Engineering Service, without any sub-division into Imperial and Provincial, and without any difference in pay, leave and pension rules, since all Engineers in the Public Works Department do the same work, and bear equal responsibilities, whether they are recruited from England or from the Indian Colleges.

(3) Moreover, Indian College Engineers have proved their fitness for the Public Works Department in Bombay, as in other parts of India, and have even risen to administrative rank (there are now two Poona College Engineers working as Superintending Engineers in charge of Divisions in the Bombay Presidency, in addition to an Indian Superintending Engineer from the Cooper's Hill College. A third Indian College Engineer acted in the Superintending Engineer's Grade last year for over 6 months, on the demise of a fourth Indian College Engineer who worked for 2 years as Sanitary Engineer to Government). Two of our Poona College Engineers have reached even greater distinction: one, Mr. Fardunji Kuvorji Tarapurwala, who earned a C.I.E., for his Famine Services, and who retired as Superintending Engineer, First Grade, 7 years ago; and the other, Mr. Vishveshvarayya, who retired as Superintending Engineer from the service of Government, to Mysore, where he was made Chief Engineer, and is now working as Dewan of that First Class State. As Indian Engineers have thus shown that they are as good as their European Colleagues, they claim that recruitment from the Indian Colleges should be doubled, especially as these Indian Colleges are now much better equipped than before, and now approximate to the best of such Institutions in Great Britain, as testified to by the Principals of the Indian Engineering Colleges. I had as Executive Engineer, under me, at different times, European Assistant Engineers, and also Indian College Assistants, and I can say that I did not find the work of the latter in any way inferior to that of the former. Double the present recruitment from the Indian Colleges, would mean the admission of two men instead of one, from each of the Engineering Colleges in the Presidencies of Bombay, Madras and Bengal, and 12 instead of 6 from the Rurki College. The first man out of a class of 20 to 30 is surely the best of his year, but there cannot be any great difference between the first man and the second best of his year. There will thus be no deterioration in the class of recruits to be obtained from these Colleges. It might be mentioned in this connection, that only in the years 1888, 1889, 1890 and 1891 were 2 recruits per year appointed to the Public Works Department, from the Poona Engineering College, and the Indian Superintending Engineer at present in charge of Deccan Irrigation, and the one who acted in that grade for 6½ months last year, were both of them the 2nd best of their respective years, viz., 1889 and 1890.

72,432. **(I.) Methods of recruitment.**—Half the vacancies available each year, should be reserved for recruits from England, and filled by a competitive examination in England (as in the case of the I.M.S.) which should be open to students from the British Universities, and to British subjects from abroad without any distinction of colour or creed.

At present the total annual recruitment for the whole of India is about 37 (vide page 3 of Government of India's Memorandum), distributed as below:—

Civil Engineers appointed in England	20	} 23
Royal Engineers	3	

Civil Engineers from the Indian	9	} 14
Colleges.		

Civil Engineers by promotion from the	5	} 14
subordinate grades.		

viz., 23 recruited from England and 14 in India. If as recommended in introductory paragraph 3, the recruitment from the Indian Engineering Colleges be doubled, the figures will be changed as shown below:—

Royal Engineers	3
Civil Engineers appointed in England	15

Recruited from Indian Engineering Colleges	18
thus ensuring equal recruitment from England and India.	

As for the promotion of deserving Upper Subordinates, a new Deputy Engineer's Grade might be created as proposed by the Secretary to Government, Public Works Department, Bombay.

72,433. **(II.) System of training and probation.**—As conditions of working are different in England and India, it would be better if the recruits from England are apprenticed to Executive Engineers in the Public Works Department here, just in the same way, as recruits from Indian Colleges are. In England many of the Engineering operations are carried out by machinery, or mechanical devices, whereas here in India, they have to be carried out by manual labour, so that the practical training obtained in the management of machinery, or complicated mechanical appliances, is of little use, and the recruit has on arrival here, to learn the management of manual labour, as the Indian College apprentice has.

72,434. **(III.) Conditions of service.**—They are the same for both classes of Officers, English and Indian, and there should be no differentiation in name like Imperial Service and Provincial Service.

Under this head it might be mentioned that the promotion of Engineer Officers depends upon the confidential qualification reports sent up by their superiors, and it sometimes happens that an average man is superseded by another, simply because the latter had had opportunities of showing good work, while the former was not fortunate enough to get such opportunities. Such ought not to be the case. Similarly, on the other hand, vaguely worded reports ought not to carry weight, unless specific instances of deficiency are given, but such vague reports are sometimes considered to be sufficient to supersede a man. This is not right, especially when no intimation of an unfavourable report is given to the officer concerned. None should, as a principle, suffer who has not had any positively bad report about him.

72,435. **(V.) Conditions of salary.**—No increase in the rates of salary of the Imperial Service is proposed, but it is recommended that those of the Indian recruited members of what is called the Provincial Service Branch be raised to the level of the other, as both do the same work, and have the same responsibilities and are borne on the same lists. The same work and responsibilities ought surely to carry the same remuneration. As to the allegation of the expenses of English Officers being high, I beg to say that those of the Indian Officers are not less than those of the other. In this connection it has to be remembered that only the ways in which the two classes spend their income is different. It is admitted that the personal expenses of English Officers are higher, but as a set off against this should be put the expenses incurred by Indian Officers, on maintaining and educating their near relatives in addition to their family on account of the Hindu joint family system, so that at the end of the service, the two classes of officers on equal pay would be in similar financial circumstances. The difference in the scale of expenses is not moreover taken into account in paying individuals, such as whether the payee is a bachelor or a married man with a large family, and it ought not to effect the question of fixing the pay of any class of officers. In the case of other Departments, the Provincial Service is given less responsible work and so is paid less, but in the Public Works Department, they do exactly the same kind of duties and bear equal responsibilities, so that there is no valid reason why the Indian trained Engineer should be paid less than his European Colleague.

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72,436. (V.) **Conditions of leave.**—The English Engineers are rightly given great facilities for going home on furlough. The Indian College Engineers ought likewise to have at least four years' furlough instead of two at present allowed, because under the present conditions, this latter has to be reserved to the end of the service, to provide against contingencies. But this want of sufficient rest causes early break down of the health of the Indian Engineer, as it would have done in the case of English Engineers, if they were not allowed furlough at frequent intervals. The interval between two periods of furlough ought also in the case of Indians to be reduced from 8 to 4 years. It would also be a great boon if the privilege leave be allowed to accumulate to at least 4 months, if the exigencies of the public service do not allow of an officer taking privilege leave while 3 months of it is due.

As to allowances while on furlough, the Indian Engineer ought to get the equivalent of the amount that the English Engineers get, viz., £472 to £800, viz., Rs. 7,080 to Rs. 12,000, whereas the present rules allow him Rs. 6,000 only as a maximum.

72,437. (VI.) **Conditions of pension.**—The pension allowed to Indian Engineers is a maximum of Rs. 5,000 for Executive Engineers and Rs. 6,000 for Superintending Engineers. These amounts were fixed when the pay of the Engineer Grades was 75 per cent. of the present rate of pay. Whatever sterling pensions are allowed to the English Engineers, the equivalent thereof in rupees at the ruling rate of exchange should be allowed to the Indian Engineers, as pension is mere deferred pay, and if the salaries of the two classes are equal, the pensions also must perforce be equal.

2. Indian Engineers should, like their English confreres, be allowed to retire on medical certificate after 20 years' service, and without medical certificate after 25 years' service, because the strain of active service in the Tropics tells as much on the health of the Indian Engineer, as it does on that of the English Engineer.

72,438. (VII.) **Such limitations as may exist in the employment of non-Europeans and the working of the existing system of division of services into Imperial and Provincial.**—It is the deliberate opinion of the Indian College Engineers that there should ultimately be no limitations to the employment of Indians in the Public Works Department, as they have proved their fitness therefor, and though at present they agree to have half the places reserved for recruits from England, still as years roll on, the percentage of Indians should continuously be increased. The present proposal of reserving half the vacancies for recruits from England, would mean the present preponderance of Europeans in the Depart-

Mr. V. T. AGASHE, called and examined.

72,440. (Chairman.) The witness was an Executive Engineer and represented fifteen officers of the Indian Imperial Engineers.

72,441. Officers recruited to the Imperial branch from the Poona College enjoyed all the privileges of Imperial officers and there were no complaints except with regard to pension and leave rules.

72,442. The division into Imperial and Provincial branches should be abolished and there should be one service with uniform conditions of salary, leave, and pension. His proposals were practically on the same lines as those put forward by the Provincial Service. There should be open competition in England with no selection and the present rule under which only ten per cent. of appointments were reserved for Indians should be abolished. It was a fact that the number of Indians in the Public Works Department was increasing (though not so the percentage which is going down) very slowly and that under the present system of selection the candidates were satisfactory, but Indians did not get in in sufficient numbers. He believed the best test for an efficient engineer was an examination, even though the local Government had recognised that better men were obtained by some form of selection.

72,443. Study leave in England should be given to officers with between five and ten years' service. It

ment, because the recruitment of Indians in England is limited to 10 per cent. (though actually even this small percentage is not being worked up to), whereas the recruitment from Indian Colleges and Subordinates includes a considerable percentage of Europeans and Anglo-Indians, as is seen from the Government of India's classified list for June 1912, which shows that the number of these latter was 100, while the Indians numbered 103 only.

The Engineering service has since 1896, been subdivided into Imperial and Provincial, and this has caused great discontent amongst the Indian Engineers, because though the recruits now turned out by the Indian Engineering Colleges are, on account of improvements in their equipment and curricula, much better trained than the product of these Colleges of more than 20 years ago, still they are relegated to an inferior position, viz., put into the Provincial service, while the latter used to be taken up into the Imperial service. And this has produced serious discontent amongst the Indian Engineers, who are now hoping for the abolition of the Provincial service.

It is admitted on all hands that the theoretical training in Indian Colleges is on a level with that in Engineering Institutions in Great Britain, and if practical training of advanced type, suited to the conditions obtaining in the Public Works Department, is to be undergone, the time for imparting to Indian Engineers such training in England is not in the beginning of a recruit's service, when he does not know exactly what is wanted in the Department, but after a service of 5 to 10 years, when he gets to know the wants of the Department, and when, on account of the previous training in the College and in the Department, he will be able to more easily pick up what is wanted from his observations on large works in England. The preliminary training should, in the case of both Indian and English Engineers, be obtained under actual service conditions, under Executive Engineers in charge of large works in India. If there are no suitable works going on in a Province, the apprentices from that Province might be sent to other Provinces where such large works may be going on. For obtaining an English training, study leave up to a year might be allowed to all Indian Engineers of 5 to 10 years' service, on the same conditions as are allowed to I.M.S. Officers.

72,439. (IX.) **Any other points within the terms of reference to the Royal Commission not covered by the preceding heads.**—I entirely concur with Mr. Harrison, the representative witness for the Bombay Imperial Engineers, in what he says with regard to the matters touched upon by him under this head, especially as to the utter inadequacy of travelling allowance at present allowed to Engineers on transfer.

was well for a man to go to England as it widened his horizon and gave him greater experience.

72,444. The expenses of an Indian officer were as great as the expenses of a European officer, and when two officers were doing the same work they should receive the same pay. He did agree that in order to attract an Englishman to India it was necessary to offer him a salary above his market value in England.

72,445. There was keen competition to get into the Provincial branch of the service and the standard of competency amongst recruits was high; and it was a fact that the rates of pay in the Provincial branch of the Public Works Department compared favourably with the rates of pay in other Provincial services. At the same time he was of opinion that if the pay was not increased the discontent in the service would continue, because the so-called Provincial service in the Public Works Department was altogether different from the Provincial services in other Departments, in that the latter were subordinate services, whereas the former was superior service equal in status (except as regards pay, leave and pension) to the Imperial Service.

72,446. In his reorganized department he would not have promotion from the upper subordinates grades to the superior cadre because the promoted men would

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come in at a late age, thirty-four or thirty-five, and would block the promotion of those in the department.

The officers now recruited to the upper subordinate service had practically the same qualifications as the officers in the Provincial branch and he only denied them the opportunity of entering the superior service because they would get promotion too late. If they were promoted earlier his objection would be removed.

72,447. (Sir Valentine Chirol.) He would not favour the reduction of the rates of pay now granted in the Imperial Service, both to Europeans and Indians, to the level of the rates now paid in the Provincial Service, because if that were done men would not come out from England. His suggestion for increased pay was put forward not only in order to obtain good men from Europe, but to satisfy the feelings of the Indians in the service, and for that purpose he was quite prepared to see Indians paid above the market rates of the engineering profession. He was not aware that the pay of the Provincial Engineering Service at present was about the average pay that English engineers received in England, but if it were so, he still desired to raise the standard of the Indian in his own country above that which an Englishman earned in England, because they had to work side by side doing the same duties. From the point of view of the State it might not be right that the Indian

(The witness withdrew.)

K. S. FRAMJI, Esq., Executive Engineer, and Professor of Engineering, College of Engineering, Poona.

Written Statement relating to the Public Works Department.

72,450. **INTRODUCTORY.**—I appear as a representative witness on behalf of the Provincial Engineers employed under the Government of Bombay. I passed out of the Poona College of Engineering in the year 1896 and was the second man to join the Provincial Service after its rules were brought into operation. I am also a graduate (B.A.) of the Madras University. I took this degree before I joined the Poona College.

I have served in many parts of the Presidency, including Sind, both in Irrigation, and Roads and Building, districts and have varied experience. I have worked under both European- and Indian-trained Imperial Engineers and have had under me also both Imperial (European-trained) and Provincial (Indian-trained) Assistant Engineers, for short periods. My services are at present lent to the Educational Department and I am employed as a Professor of Civil Engineering in the Poona College. I have been in the College now for nearly three years. I have also been an examiner in Engineering at all the Engineering examinations of the University of Bombay.

The Poona Engineering College has undergone several improvements and revolutionary changes since the time I was a student at it, both as regards reorganization of course of studies, which is now made of a more practical and comprehensive nature, and in the equipments which now render it possible to impart even a higher standard of training of a practical and experimental nature, which is of such vital importance in developing the powers of initiation and self-reliance of an Engineer. The staff is also considerably augmented.

The large and magnificent scale on which the new Engineering Laboratory of the College is being fitted up will ensure that ample facilities and scope will be afforded for original research work and that practical training, in the testing of materials and in the details of construction and working of modern mechanical appliances (e.g., steam, oil and gas engines, hydraulic machinery, electric motors, etc.), will be imparted to the students on the same high standard as is possible to be obtained in the best Engineering institutions in the United Kingdom.

Recently the Bombay Government have appointed an Advisory Committee for the College. The functions of the Committee are "to advise Government on questions of policy, organization, staff, buildings, equipment, the formation or reconstitution of classes, curriculum," etc.; also "to take the initiative in suggesting improvements and reforms in respect of any of the above matter."

As the Advisory Committee has on its board the Chief Engineer and Secretary to Government, Public Works Department, and other practical Engineers

taxpayer should be made to pay more than the legitimate market rates, but on the other hand there was no market for an engineer in India. One Executive Engineer of the Provincial Service had resigned his appointment to take up private practice and was earning more than he received in the department. It might be one remedy for the grievance of the Indian engineers in the Provincial Service if they resigned their appointments and trusted to what they could obtain in private employment, but that was not a possible solution.

72,448. (Mr. Madge.) He was of opinion that the law of supply and demand should not operate in India in connection with the engineering service.

72,449. (Mr. Advani.) At the present time the Indian engineer in the Provincial Service was not being paid the market value of his work, as engineers could earn much more in private practice. It was quite possible that the market value in England, where there was so much competition, might be less than the market value in India, and that an Indian, if his market value was considered, would receive more pay than he was getting at present. It would be very difficult for an officer with twelve or thirteen years' service to leave the service in order to take up private practice.

(officials and non-officials), it is obvious that such a Committee would exercise a most salutary control and succeed in ensuring that the training and knowledge imparted in the College, both theoretical and practical, be thoroughly perfect and up-to-date and such as would fully meet the requirements of the Public Works Department.

The course of studies, as laid down by the Bombay University, to which the Poona College of Engineering is affiliated, extends over three years, but while the general body of students present themselves for the final or degree examination in the year succeeding that in which they pass the Second year's examination, such of the students as wish to make their studies as thoroughly complete and perfect as possible, with a view to be better fitted for the keen competition which takes place for the guaranteed appointment, invariably spend an additional year before they appear for the final examination on the results of which the selection for appointment as Apprentice Engineer depends; in other words those who are in the run for the guaranteed appointment find it necessary to devote four years to their course of studies while the University requirements need only three. I make this remark to show that while the students who succeed in obtaining the guaranteed appointments of Apprentice Engineers virtually undergo the same course of studies, side by side, with those who ultimately serve in the Public Works and other departments in subordinate positions, the standard of perfection is greater in the former than in the latter. In the Roorkee and Madras Engineering Colleges the classes and standard of training are entirely different for Engineers and Subordinates, and the same is now being sought to be done in the Poona College, what, in practice, is attained, in a more or less degree, even under existing conditions. Definite proposals are shortly to be placed before the Advisory Committee, referred to above, to the effect that in order to take full advantage of the new Engineering Laboratory, the course of studies should be so revised and supplemented by an advanced experimental course in the Laboratory that the more intelligent and selected students should be made to undergo a thoroughly complete and comprehensive course, both theoretical and practical, extending over a period of four years, while a less elaborate course of three years' duration is proposed for the rest of the students. These proposals would, it is believed, be soon put into effect and the appointment of Apprentice Engineer will be conferred on the best student of the former class.

I have found it necessary to dilate at some length on this subject (which is covered by the 2nd head—Systems of Training and Probation—prescribed by the Royal Commission) in order to refute the hostile evidence sought to be advanced by some to belittle the

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work done and the type of men turned out by some of the Indian Colleges where, it is alleged, the Engineers and Subordinates are made to undergo the same kind of training.

72,451. (I.) **Methods of recruitment.**—There are five sources of recruitment in the Department for the superior posts:—

(a) by the appointment of Civil Engineers obtained from England;

(b) by the appointment of Royal Engineers;

(c) by the appointment of candidates who have proved successful in the competitive examinations of the Indian Engineering Colleges;

(d) by the appointment of Temporary Engineers, howsoever secured, that is whether from England or in India; and

(e) by the promotion of selected officers from the subordinate grades of the Public Works Department.

With regard to (a), (c) and (e) it is desirable that one uniform system of recruitment should be adopted, all through, instead of the present system of selection in England, and part competition and part selection in India. The selection system, though theoretically sound, proves faulty in practice, and is certainly not suited to the conditions existing in India, so that the proposed uniformity in practice cannot be attained by extending to India the method of selection followed in England. The competitive system is working satisfactorily for the Indian Civil Service and it is not clear why it should not give satisfaction in this Department also. It is, therefore, suggested that a system based purely on *real* competition should be introduced both in England and in India for the recruitment of the Imperial Service. The Provincial Service will then disappear as such, and so far as officers of the class (e) are concerned, an additional grade of Extra Assistant Engineers may be created in the Upper Subordinate Class carrying a maximum pay of say Rs. 650–700, and the rules for promotion in that class may be so modified as to make it possible for deserving subordinates to rise to that pay in about 25 years' service.

As regards the competitive examination proposed for admission to the Imperial Service, it is recommended that certain Engineering institutions in the United Kingdom and in India should be recognised, and graduates or superior diploma holders from these institutions may be admitted to an open competitive examination both in England and in India. The examinations should be held in London and Delhi. They need not be simultaneous, but the standards of both the examinations must be identical, and they should be held at about the same time. English or Indian graduates, both from English or Indian recognised colleges, should be allowed to compete in these examinations without any restrictions to members of any class. To ensure thorough representation of all communities, the doors of the Indian Engineering Colleges should be thrown open to all subjects of His Majesty, including subjects of Native States, and admissions to the Colleges should be by means of open competitive examinations, as is done in some of the Colleges at present.

The age of the candidates for the competitive examinations in London and Delhi should be between 23 and 25 years. The subjects should be selected solely with regard to the requirements of Indian Public Works Department, e.g., Indian Irrigation, Indian Railways, and Indian Architecture: also one Indian language.

The proportion of recruitment based on the results of the competitive test in London and Delhi should, at present, be one to one, and this proportion should gradually be increased in favour of India as conditions change. Unless a greater proportion of the superior appointments in the Public Works Department are reserved for competition in this country, the legitimate aspirations of the public in India cannot be satisfied. A gradual increase in the number of appointments annually to be given to the Indian Colleges by reducing the English recruitment was one of the recommendations made by the Public Service Commissions of 1886-87.

It must, further, be arranged that the competition is real in both the examinations. This can be secured only by offering a fixed number of appointments in proportion to number of competing candidates. A

suitable arrangement would be to offer only one appointment for every three candidates appearing for the examination with a maximum limit of 50 per cent. for each centre. In case sufficient number of candidates are not available at one centre, the deficiency can be made up by offering more appointments at the other centre. The ratio of one to three candidates, suggested above, is not unfair or unreasonable. At the Poona College, for instance, it has frequently happened that no less than 40 or 50 candidates have competed for one single appointment, and in Rurki about 125 candidates for five or six appointments.

There is no likelihood of Indians swamping the Department by this arrangement. A reference to the Government of India classified list corrected up to 30th June, 1912, would show that, notwithstanding the present unfavourable conditions of service, out of 203 Engineers recruited in India, 100 are Europeans, and 103 Indians, and if the Provincial Service is altogether abolished, as is recommended, the number of Europeans recruited in India will be much greater than now, for almost all the members of the Anglo-Indian and domiciled communities, who have now to go to Europe for their Engineering training to get entrance into the Imperial Service, will try to be recruited in India. Besides, it is not improbable that some of the men educated in Europe may come out to India so that they may learn the profession in the country in which it has to be practised, and may compete at the Delhi Examination; an instance of this nature actually happened at the Rurki Entrance in 1871-72, when the conditions and the salaries offered were tempting enough for men to come out from England to compete at Rurki. Furthermore, in addition to the Indian recruitment, there will be the London recruitment, which will always ensure the preponderance of the European element in the service.

It has also to be remembered that the Public Works Department is purely a professional and scientific service, and considerations about the preponderance of European element in it are not so weighty as in the Revenue Service, as this Department has no share whatsoever in the political administration of the country.

In this connection it may be mentioned that, though increased recruitment from Indian Colleges was recommended by the Public Service Commission of 1886-87, still the recruitment from these Colleges has remained absolutely unchanged, while the English recruitment has gone on increasing rapidly as the Department has been expanding. The total number of Engineers recruited from all sources for the Imperial Service during the last 10 years was, according to the figures supplied by the Government of India, 407, of whom only 13 were Indians; during the same period the Indian recruitment for the Provincial Service was only 90 (excluding promoted Subordinates). The proportion of recruitment from Europe and India was thus 407 to 9, as contrasted with the proportion of 21 to 9 at the time of the Public Service enquiry in 1886-87. Considering the figures for Bombay alone, it is seen that during the same period of 10 years, the proportion of Europe-trained Engineers to India-trained (including promoted Subordinates) was 4·7 to 1·6; in other words, the Indian recruitment has been only 25 per cent. of the total recruitment. Some arrangement, therefore, to allow for increased Indian recruitment at the same time as European recruitment in increased for supplying the growing demands of the Department, is obviously necessary so as to keep the proportion between Indian and European recruitment the same. Considering these facts, the recruitment of 50 per cent. in India, as suggested above, cannot be deemed excessive, specially when it is remembered that this recruitment will consist of all classes, namely, Anglo-Indians, members of the domiciled communities, and Indians.

In this connection it will not be out of place to enumerate a few of the advantages which Government derive from employing the Indian recruit in the Public Works Department where an engineer has to spend a large amount of public money, and must, therefore, have first-hand information as regards the conditions and rates of local labour, &c.

(1.) The Indian Engineer possesses the great and recognised advantage—a consideration on which great

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stress was laid when the institution of a Military Staff College in India was advocated—of having received his training in the country in which he has to practise his profession.

(2.) He knows the customs and habits of the people with whom he comes in contact, and is therefore likely to understand them better than a European Engineer.

(3.) He can understand more efficiently the local conditions of labour, contracts, the requirements of Zamindars, &c., and is therefore in a better position to deal with them.

(4.) He can, more generally, decipher the vernacular records himself, and is in a better position to collect first-hand information instead of obtaining it through his establishment, which may probably be interested in one or other of the parties concerned. For the same reason he is in a better position to impart justice and exercise greater fairness in dealing with subordinates.

(5.) He is useful from the day he joins the service, as is publicly admitted by high officials, while the European takes some years before he is equally useful.

(6.) Because of some of the above advantages he is found more useful on famine work, and has been employed to a greater extent on such works. His preferential employment on such works is an index of his powers of organisation and initiation.

In the event of the Imperial Service being thrown open once again to the India-trained recruit, as recommended, the members of the existing Provincial Service who are already listed with the Imperial Engineers, should be admitted to the same scale of pay as their Imperial confrères.

72,452. (II.) **System of training and probation.**—There is no guarantee that the preliminary training obtained at present by recruits from England will meet the requirements of the profession in India. The training should undoubtedly be specially directed to one end, viz., the efficient performance of the duties required of an Engineer in India, and this can only be achieved by prescribing specially selected subjects, including one Indian language, for the competitive test.

As a matter of fact, the training, including the so-called practical experience in England, received by the present recruits is of no use for Indian works, and they have always to receive a fresh training in India to make them useful officers. While, in the case of the Indian recruit, the preliminary training is solely directed to meet the requirements of the Department, and is considered sound and sufficiently exhaustive. This fact has been publicly admitted by persons fully qualified to speak on the subject even before the Royal Commission.

It is believed that certain Imperial officers hold the opinion, as brought forth in the evidence, that the Provincial Engineer or rather the India-trained Engineer and his work are inferior in certain respects to the average Europe-trained Imperial Engineer and the work turned out by him. Such hostile evidence merely betrays narrow-mindedness and an attempt to maintain the gulf of separation which has been unjustly created between the two services, in point of pay. Evidence of this nature will not stand the test of close and searching scrutiny and can be easily refuted by quoting specific instances in which Indian College Engineers have displayed remarkable ability and efficiency, even in administrative ranks, and proved themselves in specific cases, to be even superior when brought in competition with Imperial Engineers. The high standard of training that they get in India and their natural intelligence and ability have enabled them to attain conspicuous success and to prove themselves equally capable as their Imperial confrères to fill any office in any branch of the department. The weighty testimony of so able and experienced an officer like Mr. F. R. Bagley, retired Chief Engineer, Public Works Department, Railways, who had a brilliant and distinguished career extending over forty years and through whose hands several Imperial and Provincial Engineers had passed, will amply bear out the above remarks. His memorandum and the record of his evidence are before the Royal Commission from which it will be seen that an experienced officer like him is also strongly of opinion that there is no systematic training of Engineers in

England at present, while that in India is good and such as turns out a class of men who are qualified to do the work required of them: besides he characterises the so-called practical experience of England as being "generally a farce." Further proof of the high standard of training of India-trained Engineers can be had in the fact that even in the Professional Examinations of Assistant Engineers—which is a test of both theoretical and practical knowledge—India-trained men have generally succeeded in passing them soon and within the prescribed time and in their first attempts.

It will be appropriate to refer here to the opinion expressed by so great an authority as Mr. C. E. Mallet, of the Advisory Committee for Indian students, appointed by the Secretary of State, who, in his last annual report, says (as reported in one of the Bombay dailies) that "it is unfortunate that students desiring ultimately to make railways, bridges, and roads, leave India, where opportunities exist, for England, where such opportunities are more rarely found. It would be a great assistance," adds Mr. Mallet, "if the Railways and Public Works Department in India would afford Indian students such facilities as are so difficult to obtain here." If this suggestion is made for private students it would be applicable, with greater force, in the case of Government officers, on probation, who can be given every facility for practical training, on their own works, when such opportunities exist in India to a greater extent than in Europe.

From my personal knowledge and experience as Professor of Civil Engineering in the Poona College, and after carefully contrasting the curricula of studies prescribed in the Indian Engineering Colleges and those of the United Kingdom, I am forced to the conclusion that the former are more suited to the requirements of the Department than many of the latter, and are even in some cases, of a more difficult nature. This is supported by the results of certain Poona and other Indian College graduates who having failed to qualify themselves for the guaranteed appointments here, have easily succeeded in obtaining, after a short course of study, the necessary English degrees to qualify themselves for appointments in the Imperial Service and have been so appointed. Further, some graduates have also been able to qualify themselves easily for the Associate Membership of the Institute of Civil Engineers by passing that examination in India—one of the tests prescribed for nomination of recruits to the Imperial Service.

The probationary period, therefore, which is enforced in the case of the alumni of the Indian Engineering Colleges should be insisted upon as an indispensable condition in the case of the English recruit as well. This probationary period in the Department in India is absolutely necessary, though instances are not wanting in which some Provincial Engineers have not been given any opportunities for practical training on works during their apprentice periods, but have been placed in charge of important sub-divisions and made to carry out the duties of the ordinary trained officer, which they have successfully performed. Recently, however, the Bombay Government have issued stringent orders on this subject and have laid down the lines on which the practical training of all Apprentice Engineers should be conducted.

It is further proposed that after the selections of the candidates are made on the results of the competitive tests in London and India, as suggested above, the recruits should be consulted, with a view to specialization, as to the class of work on which they desire to be trained, such as Railways, Irrigation, Roads and Buildings, Sanitary Engineering, &c., and as far as practicable the training might be arranged in accordance with their tastes and inclinations. They should all, whether European or Indian recruits, pass one year's apprenticeships in the countries which can impart the best training in that branch of Engineering. For instance India will be best suited for Irrigation training and possibly Railways, and Europe for Sanitary Engineering, and so on. The Secretary of State should make arrangements for the proper training of apprentices in Europe, and the Government of India for those who are to learn work in India.

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All the apprentices should be paid a reasonable salary, and all the expenses of training, such as payment of premia, &c., should be borne by Government. By this system a special training required for special branches will be imparted and this will serve the beneficial effect of keeping the officers of a scientific service up-to-date. The division of the Public Works Department into separate branches such as roads and buildings, irrigation and railways is already carried out in some provinces, and in others it is being carried out gradually. This may be expedited and brought into effect as early as possible.

It may be remarked that the conditions of this probationary period should be observed in the strictest sense, i.e., it should involve selection and a possibility of rejection at the end of it. For candidates from England free return passage for rejected candidates may be provided to meet the plea which may be urged that this condition may deter candidates from England by reason of the attached risk.

72,453. (III.) Conditions of service.—The conditions of service for recruits from England and India, who are required to do identically the same work and bear the same responsibilities, differ very much, and this is the principal cause of the great discontent that prevails amongst the Indian recruits.

Ever since the first of the Indian Engineering Colleges was established in the year 1847 and until the year 1895, the Indian Engineers have enjoyed full and equal rights and privileges with engineers recruited in England and have done exactly the same work. They have also done the same work after the Provincial Service was introduced in 1895.

When the Cooper's Hill College was established in 1871 it was feared that its establishment would injuriously affect the position of the Indian Trained Engineers, but to dispel this fear the then Lieutenant-Governor of the North Western Provinces, Sir William Muir, after consulting the Government of India, gave an authorised assurance in a public speech delivered at Rurki in November 1873 that the Cooper's Hill College would in no degree affect the privileges enjoyed by the Indian Colleges or the appointments guaranteed till then, to the Colleges, as the requirements of India were large enough to provide for all the Engineers recruited both in England and India on terms of equal rights and privileges.

Some time later, however, the Provincial Engineering Service came into existence with its pernicious results. It was the outcome of the unjust and unsound recommendations of the Public Service Commission which was appointed in 1886 to "devise a scheme which may reasonably be hoped to do full justice to the claims of the Natives of India to higher and more extensive employment in the public service." While the Commission did the good expected of it by laying down strong and sound reasons for creating Provincial Service branches in various other Departments they distinctly erred in the case of the Public Works Department in which they evidently failed to realize that the conditions were entirely dissimilar. This Department was one of those in which recruitment used to be made on an equal footing as regards pay, promotion, duties and responsibilities for recruits from Europe and India, and hence in recommending the creation of a Provincial Service for it, on a lower scale of pay, they took a distinctly retrograde step. In most other Departments which resembled the Civil Service more closely than the Public Works, either the Provincial Service scheme was not introduced at all (in which superior posts were open to Indians) or where it was introduced it regularized recruitment and considerably raised the status and dignity of the subordinates and ensured more extensive employment of those Indians who had never before got any better treatment than employment as subordinates. For instance conditions in the Provincial Civil Service (Revenue) were made so attractive and gratifying as to render it possible for selected officers of the Deputy Collector's grade—who unlike the Engineers are men without any special technical training or professional qualifications—to rise to certain listed posts of Collectors on the high salaries of Rs. 1,200 and Rs. 1,600 per mensem.

The situation created by the institution of the Provincial Engineering Service is seen to be all the more

unjust when it is remembered that no such differences in pay or prospects were introduced in other Departments like Finance, Accounts, Traffic, Salt, etc., in which, as in the Public Works Department all officers whether recruited in England or India were on a footing of equality. This differentiation in treatment is all the more unendurable when it is realized that in these Departments recruitment in India is made by nomination and the training and educational qualifications of the recruits are not of the same high standard as of the recruits in the Public Works Department, in which recruitment is made by open competition.

The Public Service Commission seems to have based its recommendations regarding the Provincial Engineering Service on the ground that Engineers obtained from England received a better professional training than that which the Indian colleges were capable of affording. This conclusion has not been confirmed by what has subsequently transpired, for men trained in Indian colleges have attained the highest ranks in the Department since the year 1887 when the said Commission sat. Their high standard of qualifications and professional merits have been admitted by officials of the highest ranks who have come in close contact with all classes of Engineers and have also been recognised by Government by the bestowal of titles such as C.I.E., etc., on India-trained Engineers.

The Government of India, while giving effect to the recommendations of the Public Service Commission, also recognized that the conditions in the Public Works Department were quite different from those in other Departments, by introducing, in the Public Works Department Provincial Service, no further changes from the conditions originally existing except in the matter of pay only, the Provincial Officers still being borne on the same list and required to do the same work and bear the same responsibilities as their Imperial confrères. The policy recommended by the Commission was also not consistently followed by the Government of India in the case of some temporary Indian College Engineers. Certain officers who had failed to secure appointments in Rurki and who had no special claims whatever, were subsequently made permanent and put on the Imperial list, while officers who had secured guaranteed appointments were placed on the Provincial list and still continue to remain on that list because of the absence of any provision in the rules to transfer those men to the Imperial list, however competent they may be.

These facts clearly indicate (1) that the policy advocating the adoption of the Provincial Service Scheme for the Public Works Department as suggested by the Public Service Commission is unsound, (2) that in accepting it the Government were ignoring the pledge given by Sir W. Muir in 1873, and (3) that Government have, themselves, broken away from it and have relaxed or infringed the rules in the case of certain temporary Engineers. Justice and equity would, therefore, demand that the rules of the Provincial Service should be entirely set aside for all officers, and that the India-trained Engineers should be reinstated in the position they formerly held, i.e., they should be placed on terms of equality with the Imperial Engineers.

The Provincial officers, subjected to these disabilities and grievances, have been sending memorials to the Government of India and the Secretary of State for the abolition of the Provincial Service since 1902, but have not received any redress as yet. They have been promised full consideration of their case after the investigations of this Commission are completed, as will be seen by the replies (given below) of the Under Secretary of State in the House of Commons. The Provincial Engineers now concentrate their hopes in the Royal Service Commission for a complete redress of their long-standing grievances by recommending the entire abolition of the Public Works Department, Provincial Service. Such an act of justice and grace will give a further impetus to technical education, to which so much attention is being rightly devoted, and will also prove a source of intense gratification not only to the Indian communities but also to the Anglo-Indian and the domiciled European communities, who have proved themselves particularly suited

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for this profession, as judged by the history of the careers of the distinguished men turned out by the Rurki College, since its establishment.

The questions and replies referred to above are as follows:—

I. The Under Secretary of State, Mr. Montague, made the following statement on the 15th May 1912, in the House of Commons in reply to certain questions:—"That it was impossible to state exactly when the decision would be reached in this most difficult and complicated case. The Secretary of State in Council had already sanctioned certain increases in pay, which, he hoped, would satisfy those interested, but had found it necessary to reserve other parts of the Governments of India's proposals for further consideration. The matter would be expedited so far as was possible till a final decision was reached on all issues. Lord Crewe was not prepared to consider the laying of papers on the table." The "increases in pay," referred to above, are those granted in the 1912 scheme, which merely gave what had been proposed to be withheld and taken away by the 1908 scheme.

II. In the 10th October 1912, again, the following questions were asked in the House of Commons and the Under Secretary of State gave replies as quoted below:—

Questions.—(1) "Whether a final settlement had yet been arrived at in the case of the Provincial Engineers; would he state what were those parts of the Government of India's proposals which have been reserved by the Secretary of State for further consideration, and when a division upon them would be taken?"

(2) "Whether it was proposed to restore, either completely or partially, to the Imperial Service, those Provincial Engineers who had received their training at Indian Engineering Colleges?"

(3) "Whether the Secretary of State would arrange that the members to be co-opted on the Public Services Commission, to represent the Provincial Engineer Service, should be taken from those who might be duly selected for the purpose by the Provincial Engineers themselves?"

Replies.—(1) and (2) "As the Honourable Member was informed on May 15th last, orders have been passed sanctioning certain increases of pay to the Provincial Engineers. The subject reserved for future consideration is practically the one mentioned in the Honourable Member's second question, viz., whether any change shall be made in the system of recruitment for the Imperial Service, and if so, under what limitations and conditions, so as to allow the appointment or promotion to that service of Engineers trained in India. This subject is covered by the terms of reference to the recently appointed Royal Commission on the Public Services in India."

(3) "The procedure to be followed in the matter mentioned has not yet been settled. In any case the selection of co-opted representatives will be for settlement by the Royal Commission itself."

72,454. (IV.) Conditions of salary.—(1) Salary.—The Indian recruit draws approximately two-thirds of the Europe-recruited officer. Considering that both have to do the same work, bear the same responsibilities, and maintain the same social position in conformity with their rank in the Department, this practice of paying the two classes of officers at different rates is utterly unfair and unsuitable. It is contended that emoluments should depend on services rendered, and that the distinction between the two classes of officers who do the same work should be obliterated. Such a difference has resulted in the following anomalies and defects:—

(a) The minimum pay of India-trained Executive Engineers is much less than the maximum pay of the Imperial Assistant Engineers. Under this arrangement, on several occasions, an Assistant Engineer of the Imperial Service in charge of only a sub-division has been drawing more pay than his immediate superior of the Provincial Service, bearing more than double the responsibility, and having to maintain a much higher social position suited to his rank. The outside public can have no idea of the detrimental effect that such an arrangement has on the discipline amongst the subordinate officers, for in India the

position of an officer and the respect due to him are gauged not so much by the rank he holds as by the pay he draws.

(b) The minimum pay of an India-trained Superintending Engineer is less than the maximum pay of an Imperial Executive Engineer.

(c) Anomalies exist in connection with local allowances as per Appendix 19 of the Public Works Department Code. It will be seen that subordinates of the rank of Sub-Engineers get better allowances (in the form of Presidency and other allowances) than the Assistant and Executive Engineers of the Provincial Service though they have neither to live in the same style nor to maintain the same position. On this account cases have occurred where senior Sub-Engineers have refused promotion to the Officers' grades.

(d) Generally the pay granted to India-trained recruits is inadequate and is not commensurate with their work and responsibilities.

(e) The minimum pay of Rs. 535 fixed is so low that it is not even a living wage for an Executive Engineer. From a statement of expenditure furnished by an Executive Engineer (Provincial Service), who is at present drawing a salary of Rs. 535, it is seen that after he has met all his outside expenses such as disbursing payments for house-rent, menial establishment, the education of his children, and after paying contribution to Civil Engineers' fund, he has only a balance of Rs. 55 left for his personal, domestic, and other requirements of life, and for the provision he has to make for extra expenditure consequent on transfers, and on account of ill-health, or visits to his home or other parts of India, &c. The statement in question can be produced if required.

It may be argued that an Indian drawing Rs. 535 need not run into such expenses and that other Indians drawing similar salaries in other departments find them sufficient. This argument may be met by pointing out that Indians belonging to other departments and getting similar salaries are in subordinate positions and are not required either to pay such heavy rents or to live in the style and position of an Executive Engineer, who is the local head of the Department. The latter has to move freely among the District and Divisional Officers, and it is in the highest degree desirable that he should receive adequate pay and emoluments (similar to the Imperial Executive Engineer) so as to be able to maintain his dignity as the principal officer of the Public Works Department in the District, filling a high post of trust and responsibility.

It often happens that a Provincial Officer drawing a low salary succeeds an Imperial Officer on a much higher salary in the same place, and he is required to maintain the same establishment at the same rates of pay, join the same institutions, such as local clubs, &c., and live in the same style. It is, moreover, a popular belief that Government also expects him to mix socially with other District officers in the interests of work, and in one instance, at least, it is said that it was hinted to a Provincial Executive Engineer that even his promotion depended, to some extent, on the nature of his social relations with other District officers. Unless, therefore, he is adequately paid, it is not fair to place an officer of Government in such position.

It is in consequence of such a false and incongruous situation which a Provincial Engineer finds himself forced into—a situation which is rendered all the more galling when contrasted with the easy and highly affluent position, unencumbered by any social obligations, which his contemporaries at College, possessing very mediocre and far inferior abilities, are found to be enjoying in the pursuit of independent practice as Architects, Surveyors, &c., in places like Bombay, &c., that some of them have been seriously considering the desirability (a few have actually put the resolution into effect) of giving up their appointments under Government even at the sacrifice of their prospective pensions. This picture is by no means overdrawn, though it may apply only to a few cases.

It may here be mentioned that various flimsy arguments are being advanced by interested parties in favour of differential treatment, as regards salary, being accorded to Indians on the following grounds:—

(1) Imported labour should be paid more than indigenous labour.

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(2) The market value of Engineers trained in India is much below that of Europe-trained Engineers.

(3) The mode of life of Engineers recruited in England is more expensive than that of those recruited in India.

(4) Inability of Indians to perform administrative work.

The fallacy of these arguments can be easily demonstrated.

(1) Every Engineer ought to know that it is not possible to get the same work done on the same spot by paying different wages. If imported labour has to be paid more for a certain kind of work, the wages of local labour have forthwith to be raised to the same scale. Such an argument will not be advanced by Englishmen in Australia, Canada, and other Colonies, because the Colonists will not entertain the same.

If imported labour is dissatisfied with the scale of wages offered, the obvious remedy lies in demanding higher wages than what it gets and not higher than what another class of labour—local labour—doing exactly the same work, gets.

Arguments of this nature must lose all weight and force if the resentment of imported labour can rest appeased, as appears to be the case, provided the local labour is paid on a lower scale.

(2) Whatever the relative values may be of Europe-trained and India-trained Engineer so far as the average type of men is concerned (this is not the point of contention at issue) it cannot, for a moment, be disputed that the pick of the Indian Engineering Colleges (who alone get admission to the superior grades of the Public Works Department and whose value is being sought to be depreciated) are as good and efficient as the Europe-trained men in the Imperial Service. This has been admitted, in public utterances as well, by distinguished and eminent persons qualified to speak on the subject. In support of the statement that such officers have the same market value as Europe-trained men, instances can be quoted in which India-trained officers have been employed, on or before retirement, by Municipalities, etc., on posts of the highest rank, on which Europe-trained men have been employed, either previously or subsequently, on the same salary.

Besides, no Municipal or any Public Body, or a Native State, etc., would ever think of employing any one class of labour at a higher rate, if it is possible to get the same kind of work done as efficiently by another class at a lower rate. Hence, so far as the Public Works Department requirements are concerned, such an argument, as has been advanced, is devoid of practical significance.

(3) As regards the cost of living, it may be pointed out that though the channels of expenditure in the case of Europeans and Indians may be different, they are as many and as varied in the one case as in the other. The Provincial Service does not consist wholly of Hindus or orthodox habits or principles. It includes Anglo-Indians, domiciled Europeans, Christians, Parsis, Mahomedans and unorthodox Hindus, also. Most members of these classes, when occupying high official positions, have been known to adopt the European standard of living, and while they and their wives may mix with Europeans freely, they cannot possibly forsake their Indian friends and relations who may not have advanced so far, so that they are often obliged to keep up a double establishment. Besides, unlike the European, an Indian has very often to support not only his own family, but a large number of dependents closely or distantly related to him.

(4) The argument regarding the inability of the Indians to do administrative work stands self-refuted, for past experience has shown that, in several instances, Indian Officers have, when given the opportunity, displayed conspicuous ability and been eminently successful in administrative work, for which their services have been rewarded by Government, in some cases, by the bestowal of titles as C.I.E.'s, etc.

Some of the highest appointments, in all departments, have been occupied by Indians with distinction, and the Indian Engineer has been no less conspicuous in this respect. Many Indian College Engineers have held administrative appointments and have done credit to themselves, their alma-mater, and

their country; one of them is at present holding the highly responsible position of the Diwan of a premier State—an appointment requiring administrative ability of the highest order.

The work and duties of an Executive Engineer involve as much the exercise of administrative ability, especially in the Irrigation Branch, as capacity for the practical execution of work; hence, as almost all Indians are proved and acknowledged to be a success as Executive Engineers, there is no reason to believe that they will fail to display administrative ability in the higher ranks.

Having regard to all these considerations it is contended that emoluments should solely depend on services rendered, and that the distinction between the same classes of officers, who do the same work and bear the same responsibilities should be done away with as early as possible.

(2) *Local allowances.*—Similarly the proportion of two-thirds which has been carried to such an extent as to produce the anomaly of paying more in the form of local allowances to subordinates than the officers under whom they may be working, should be obliterated. This difference in local allowances is specially unjust, as these allowances are always given for a specific purpose, that is, as compensation for local disabilities, which equally affect both classes of officers.

(3) *Travelling allowance rules.* (a) *Travelling allowances for ordinary tours.*—The Engineer Officers get their travelling allowance at a daily rate when they are out of headquarters. They have to maintain their permanent conveyance at their own expense during periods of halt at headquarters. It generally happens that most of the Executive Officers have to pass nearly four months at headquarters when it is not possible for them, owing to climatic conditions, to move out, systematically, or for any length of time.

Further, taking into account the periods of absence from the district on short leave or during holidays as also the necessity of spending a few days each month at headquarters for accounts purposes, it will be seen that, roughly speaking, an Engineer Officer generally gets his travelling allowance for about six months only in the year, while he has to maintain at least two horses permanently throughout the year, and also pay for carting, etc., of his kit when he actually travels. It happens, therefore, in a good many cases that he is actually out of pocket as regards travelling allowances earned and expenditure incurred, so that a part of his already limited income has to be spent on travelling expenses, and this is not in keeping with the spirit of the Travelling Allowance Rules.

It is, therefore, suggested that Engineer Officers should either get a fixed travelling allowance like the officers of the Revenue Department, or the scale of their travelling allowances should be raised to provide for the actual travelling expenses. The fixed travelling allowance recommended is Rs. 150 a month for Executive Engineers, in accordance with what is actually given to officers of other departments of similar standing.

(b) *Travelling allowances on transfer.*—These have been universally recognized to be inadequate and it is hoped that the rules regarding these will be amended at the earliest opportunity so as to provide, at least, for the actual expenses incurred by officers on transfers, limited to say three times the railway fare or road mileage ordinarily allowed for touring. Liberal allowance should also be made for the carriage of furniture and personal effects.

(c) *Travelling allowance for short voyages by sea in coast districts.*—Though few officers are affected by these rules, it would not be fair to ignore the hardships to which they are subjected. All officers travelling by steamers are paid only single first-class fares for their voyages however short or long these may be. Allowances granted for journeys by rail prove insufficient to cover an officer's expenses when he is travelling with his family, but the hardships are greatly accentuated in the case of voyages by sea where only single first-class fare is allowed. The unfavourable nature of the rules operates very harshly, the more so in the case of Provincial Engineers with their low scale of pay, and substantial increase in the scale of allowances is urgently called for.

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72,455. (V.) *Conditions of leave.*—Here again there is much disparity between the conditions applying to each of these two classes of officers.

Great stress has been laid on the advantage to be derived by an Engineer in visiting works in foreign countries, and the element recruited in England has received undue credit on this account. Unless the conditions of leave are the same, it becomes impossible for India-trained men, even if they desire to do so, to secure the same advantages in this direction as English recruited Engineers.

Again, the nature of an officer's duties in the Public Works Department involves continued exposure and discomfort for long periods, and the health of an India-trained officer suffers equally with that of imported men. There is, therefore, no reason whatever to perpetuate the present distinction.

Indian College Engineers should, therefore, receive exactly the same leave conditions as their contemporaries recruited from England. It is generally recognised that India-recruited Engineers break down in health much earlier than men obtained from England, and this is due to insufficient leave. There seems however no reason to apprehend that given equal opportunities the Indians will avail themselves of the leave rules more freely than they have been doing hitherto and that they will thereby put Government to extra expense.

Again, officers recruited in India in certain other services, e.g., the Traffic Accounts, Opium, Finance, etc., are under more favourable leave rules, and there is no reason why India-trained Engineers should not be on an equal footing with these other services.

72,456. (VI.) *Conditions of pension.*—Here again there is a much resented distinction, vide Article 636, C. S. R., which will create invidious and unjust anomalies. For example, an India-trained Chief Engineer will draw less pension than his own subordinate recruited in England.

It is submitted that it is a well and universally established principle, that pensions are granted as retiring provisions for specific services rendered to the State, and it is, therefore, illogical and unjust to create or maintain any distinction in this direction between persons who have in fact rendered exactly the same services. In other words, pensions ought to be wholly and solely dependent on specific services rendered and not on place of original recruitment, for this does not involve any special merit.

72,457. (VIIa) *Limitations in the employment of non-Europeans.*—As urged above the Department should be recruited half from England and half in India for the present. The recruitment in England should be open to all British subjects equally, irrespective of domicile, colour, caste or creed.

Latterly, during the existence of Cooper's Hill College only 2 Indians were eligible for appointment even after competition, and at present the number of Indians eligible for appointment in England is limited to 10 per cent. of the total annual recruitment.

Limitations of this nature should be barred.

72,458. (VIIb) *Working of the existing system of division of services in the Public Works Department into Imperial and Provincial.*—The division of the Public Works Department into Imperial and Provincial sections has been anything but a success, and can never be so in view of the surrounding circumstances and the past history of the Department. The distinction created between the two classes of officers, who do exactly the same work and bear exactly the same responsibilities is intensely resented and will inevitably result in splitting up the whole Public Works Department into two hostile camps, and this must greatly injure efficiency. The interests of the two classes of officers are now widely divergent,

and this is conspicuous in their relations. Concerted action has become impossible, and the general feeling of *esprit de corps* which formerly prevailed, has ceased to exist. In its place there will assuredly spring up a deep and widespread feeling of suspicion and distrust between the two classes of officers which must wreck harmonious working.

So long as the two classes possess, on the average, equal educational and professional attainments, and this is undoubtedly the case, any differentiation between them is unworkable. It is impossible to force a distinction in pay when none exists in attainments, and any attempts to do so must create complications and raise issues which it would be as well to avoid.

Again, it is, in fact true that many India-trained Engineers possess superior qualifications to some officers recruited in England.

It is, therefore, urged that the said differentiation, which is illogical and unjust, should be obliterated and extinguished, and that the alumni of the Indian Engineering Colleges should be restored to the position they formerly occupied, that is to say, there should be only one service in the Public Works Department.

72,459. (IX.) *Miscellaneous.*—No analogy with other Provincial Services.—It is widely felt that the resistance offered to the oft-repeated prayer of the alumni of the Indian Engineering Colleges to be restored to the position they formerly occupied, that is, on an equality with recruits from England, is due in a great measure to the apprehension that if this is accepted, other Provincial Services will be entitled to similar treatment.

It is submitted in reply, that the question of other Provincial Services is foreign to the point at issue.

There is no parallel between the case of Engineers recruited in India and other Provincial Services. Engineers recruited in India are not situated in the same relation to Engineers recruited from England, as members of other Provincial Services bear to the Imperial Officers of their Services. But, on the contrary, except as regards pay, leave and pension, there is in all other respects no distinction between the two classes of officers in the Public Works Department.

It is, therefore, submitted that any argument, opposing the restoration of the alumni of Indian Engineering Colleges to the position they formerly occupied on the ground that this would entitle other Provincial Services to similar treatment, is unsound and cannot be raised.

Temporary Engineers.—The position occupied by these officers in the Department is undoubtedly most unsatisfactory and requires reconstruction. These Officers are at present recruited in an irregular manner, viz. :—

(a) From India-trained and duly qualified Engineers who have failed to secure guaranteed appointments when competing for them.

(b) From Engineers appointed under covenant in England.

(c) From unqualified persons appointed in India.

It is submitted that, except in special cases where experts are required, these officers should be recruited from qualified persons who have successfully undergone the prescribed training in any Indian Engineering College, and that no other person should be engaged until this source of supply is exhausted.

It is contended that this arrangement will be greatly beneficial to the State Colleges in India, and will tend to attract suitable candidates.

The present conditions under which these officers serve are not such as to secure efficiency. There is practically no security whatever, for these officers are liable to be discharged with very limited notice regardless of the length of their service.

It is suggested that such service should be regarded as permanent non-pensionable service, and there should be an incremental scale of pay.

Mr. K. S. FRAMJI, called and examined.

72,460. (Chairman.) The witness was an Executive Engineer and Professor of Civil Engineering in the Poona College. He represented the Provincial engineers.

72,461. The standard of efficiency amongst Provincial engineers was very high and there was keen competition for entry to the service, but he was not

prepared to assume on that account that the salaries paid by Government were adequate. It had been found by experience that they were not adequate and the keen competition was simply due to the fact that the appointments in the service were so few. If the number of vacancies were larger the competition would not be so keen unless the conditions of the service

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were improved. There was no sign at present of the competition falling off, but it was just possible it might do so. The great discontent which at present prevailed might prevent men of superior intellectual attainments entering the service.

72,462. Even though no European officers were recruited to the engineering service he would recommend the imperial scale of pay for officers recruited in India. Having regard to the service rendered, the officers were entitled to much higher pay than they received at present. The argument he had used in his written statement, that if imported labour was dissatisfied with the scale of wages offered they should demand higher wages, was put forward to show that Europeans should not ask for lower wages to be paid to Indians but for higher wages to be paid to themselves.

72,463. He did not agree that the abolition of indigenous distinctions and the payment of a foreign service allowance to Europeans would mitigate the grievance that was felt, but if the alternative offered was a foreign service allowance or the maintenance of present conditions he would accept the foreign allowance.

72,464. The selection system of recruitment had proved faulty in practice but he could not give any specific instances of where that faultiness had occurred. Men who had been disqualified in India had gone to England and had obtained admission to the Imperial service although they were of an inferior type.

72,465. With regard to his recommendation for a competitive examination in London and Delhi, he thought it would not be impracticable to frame a syllabus for an examination of the kind suggested in the written statement, and such an examination would not be unfair to Europeans except perhaps in regard to the subject of language. He advocated sufficient attention being paid to such subjects as Indian irrigation, Indian railways, and Indian architecture, because he found that in the English university courses sufficient emphasis was not laid upon them. In some they were treated as optional subjects, and in some others they were entirely excluded. More attention was paid to Indian irrigation and hydraulics at Poona and Rurki than was paid in the British engineering colleges.

72,466. All candidates recruited in India or in England should have a year's special training on the class of work in which they desired to be trained, and during that year they should receive about three-fourths of their ordinary salary. That period of probation should be given to all whether they came from Europe or from Indian colleges.

72,467. He would stop the promotion of upper subordinates to the higher services. Most of the men who were now recruited in that way would, probably, under the scheme put forward, be recruited direct, about ten or twelve years earlier than they were now recruited. Most of the men who were recruited to the upper subordinate grade were men who had only fallen short of a guaranteed appointment by a very few marks. He did not intend to shut the door to promotion, as, under his proposal, with increased recruitment, men who now entered the upper subordinate service would stand the chances of being directly recruited to the superior service immediately on passing out instead of waiting, as they did now, for a good many years. Inferior students would go into the upper subordinate service and remain there, but their prospects would be greatly increased by the addition of an extra-assistant grade with a salary of Rs. 650 to Rs. 700, and if listed posts were reserved for them there would be no harm in giving them executive charges in exceptional cases.

72,468. (Lord Ronaldshay.) It would be practicable to recruit by means of a competitive examination with an Indian language included in the subjects. The language would form a very minor part of the whole syllabus and the time spent in studying it would not be wasted (even if a candidate was not successful in obtaining an appointment) more than what was inevitable in all similar cases.

(The witness withdrew.)

72,469. (Mr. Sly.) The standard of admission to the Poona College of Engineering was the Previous Examination of the Bombay University, but there were applicants who had passed the M.A. and the B.Sc. The graduates entering the college were certainly above the average. Up to recently the first man on the list had the option of a Government appointment, but it was now laid down that the best man should be selected irrespective of his position on the list. He had known no case of refusal of the appointment. The second best man was offered an upper subordinate appointment, but very often he did not accept it, preferring to go into private employment or to go to England to qualify for the higher service. The upper subordinates and Provincial service candidates were all drawn from the same class, but in future they were to be given two entirely different courses of instruction.

72,470. He did not think the proposal to have a separate college for the whole of India for the Provincial service was a very sound one. The provincial colleges had been growing up to the requirements of the services and it would be a pity to relegate them to a lower status.

72,471. The present system of selection in England might possibly lead to cases in which inferior men came into the service and superior men were rejected. It was quite possible that the fact that a man went to England from Poona and took a good course of instruction for three years did not prove anything except that the training at Cooper's Hill, for instance, was better than the training in Poona.

72,472. (Mr. Madge.) It would not be possible to do away with the recruitment of Europeans, and the arguments he had put forward in his written statement as to the advantages gained by employing Indian engineers were not put forward as arguments in favour of abolishing the European element but in favour of the employment of Indians.

72,473. The examinations he asked for would not be simultaneous in the sense that the same sets of questions would be prescribed, but the standard would be practically equal in every respect. To get over the difficulty which might be caused by the number of successful candidates in one year being larger than the number of vacancies extra recruitment might be made by increasing the cadre.

72,474. (Mr. Abdur Rahim.) The competitive examination held by the University covered a good deal of practical work, as the practical work done in the college had to be tested at the University examinations. The note books in connection with the laboratory and field work of the students were placed before the examiners. There was no real practical work before appointment such as was to be found at Rurki. The same kind of examination could also be adopted for English recruits, as field work and laboratory work, on the same lines, could be arranged for, both in England and in India. The schools would probably have to modify their courses to suit the requirements of the competitive examination.

72,475. (Sir Valentine Chirol.) The grievance with regard to salary would not be removed if the salaries of European engineers were reduced to the salaries of the Provincial service officers because the service was dissatisfied not only with the disparity of salary but with the lowness of pay. There had been instances in which men had been dissatisfied and left the service for other pursuits and had obtained better income.

72,476. (Mr. Advani.) In the granting of foreign allowances care should be taken to see that no anomaly occurred. No difference whatever should be made in the pay of the grades above assistant engineers, because the question of social status and dignity as well as the equality in work and in responsibilities came into greater play when a man reached the Executive Engineer's grade. The best form of foreign allowance would be a percentage of pay.

72,477. (Mr. Kent.) Indian students had been to Cooper's Hill and obtained appointments in India and he knew of no restrictions which limited the number of admission of Indian students at Cooper's Hill, though he believed there was latterly a limit in the number of appointments given to them.

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Mr. H. N. ALLEN.

H. N. ALLEN, Esq., Principal, College of Engineering, Poona.

Written Statement relating to the Public Works Department.

72,478. (I.) Method of recruitment.—The present method of recruiting for the Provincial Service in the Bombay Presidency is, as far as I can judge, satisfactory.

Candidates are recommended by the Principal of this College, and are appointed as Apprentice Engineers.

Selection depends, to a large extent, on the place taken in the Bombay University Examination for the degree of Bachelor of Engineering; but other qualifications are to be taken into consideration by the Principal, in making his recommendations. I have no direct knowledge of the methods used in recruiting for the Imperial Service.

72,479. (II.) System of training and probation.—Under Government Memorandum No. 379-E. of 6th March 1908, Apprentice Engineers from this College have to send in monthly notes, on the work done by them, to the Executive Engineer under whom they are working. These are forwarded, through the Superintending Engineer, to this office, are examined and criticized by the members of the College staff, and finally returned through the proper channels to the Apprentice Engineer. We have thus an opportunity of seeing that the practical training is being carried out on satisfactory lines, and that the Apprentice Engineer is profiting by the opportunities given him to obtain practical experience on works, and in the office.

72,480. (III.) and (IV.) Conditions of service and salary.—The distinction drawn between Imperial and Provincial Engineers causes, I understand, some dissatisfaction among the latter.

Mr. H. N. ALLEN, called and examined.

72,483. (Chairman.) The witness was Principal of the Engineering College, Poona. He had served at the College during the whole of his service of thirteen years, but had been Principal only for the last three years.

72,484. The nominal qualification for admission to the college was the Previous Examination of the Bombay University, but it was possible to make very careful selection and obtain people who had high mathematical attainments or who had done very well in science. It was also possible to make sure that the English of the candidate was good enough to enable him to understand the courses fully. If a man had been a year in an Arts College and had passed a college examination at the end of the year he was qualified to appear for the engineering examinations.

72,485. A candidate could enter the college at about seventeen but men had entered as high as twenty-two or twenty-three. A man with the Previous Examination certificate might come in at eighteen, one with an Intermediate Arts at nineteen, and a B.A. or B.Sc., at twenty-two.

72,486. The course was for three years but students who wished to compete for the Government appointment of apprentice engineer generally stayed on for a fourth year. There was very keen competition for admission. Fifty students were admitted yearly for the Civil Engineering branch out of some two hundred applicants. Recently the course had been made stiffer and men in the B.E. Course were not getting through quite as fast as formerly. When things were in better running order he expected that about forty would pass through every year. The Advisory Committee of the College was now considering the entire reorganization of the college, separating the course into two, one for engineers, and the other for assistants, and in that case only a comparatively small number would be taken for the engineers' course. At present they were altogether in one class. The engineers would be given a four years' course and much more practical work than they had now. It was not proposed to alter the theoretical part very much, but an extra year would be given in the workshops and the new mechanical engineering laboratory,

Although they hold the same offices as the Imperial Engineers they draw lower pay and, though this may be justified in some cases by the fact that they are able to live more comfortably than a European at less expense, there can be no doubt that it causes a soreness.

The difficulty might, perhaps, be got over by extending the period of Apprenticeship, for members of the Provincial Service, and appointing them as Assistant Engineers, third grade, at such a time as would make their total emoluments, before retiring, much the same as at present.

72,481. (V.) and (VI.) Conditions of leave and pension.—I have no information as to the working of the leave and pension rules in this department.

72,482. (VII.) Such limitations as may exist in the employment of non-Europeans.—Only one Apprentice Engineer is admitted to the Provincial Service, under the Bombay Government, annually. For many years only Indians have been recommended. Europeans and Anglo-Indians, who wish to study Engineering, as a rule go to the Thomason College, Rurki. As there is generally no very great difference in ability, and other qualifications, between the candidates who, in any one year, obtain the first two or three places at the University Examination, there is little doubt that this College could supply a larger number of satisfactory Apprentice Engineers than at present. This will certainly be the case when improvements in the College course, introducing a much larger amount of practical work, which are now under consideration, have been carried out.

Several past students of this College have proceeded to England for further study, in the hope of being appointed to the Imperial Service. Two of these have received appointments.

and it was hoped in that way to turn out a good class of men.

72,487. It very often happened that a subordinate officer had practically the same qualifications as a provincial man and had only failed by a few marks. Under the new régime subordinates would not get the same training, as they would only have a three years' course. The training in future would be better for an upper subordinate than it was now because it would be more practical, but there would be a distinction between that training and the higher training given to provincial man. He was of opinion that recruitment to the Provincial Service should be direct.

72,488. He believed there was room for a college for the higher service in the Bombay Presidency as there were many openings now in Bombay and in the Native States surrounding or dependent on it for engineers apart from Government service. The Mysore Government were endeavouring to make a special arrangement with the Bombay Government to take an increased number of men from their State, and Baroda, Hyderabad, and the Central Provinces also sent their men to the college to be qualified as engineers. The country was too large to have one college for all India. There was room for two colleges or two separate courses taught in the same college, one for engineers and the other for overseers in Bombay as there were many openings for good engineers.

72,489. Candidates for the Provincial Service were recommended by him for appointment and he only recommended for each vacancy.

72,490. With regard to the suggestion in his written statement that the difficulty with regard to pay might be overcome by extending the period of apprenticeship of members of the Provincial Service and by appointing them assistant engineers, he wished now to withdraw that remark because on further consideration he did not think it would be found practicable. He had been told there was a strong feeling in the Provincial Service with regard to the differences in pay.

72,491. He would not go so far as to say that in years to come there would be room for a large increase

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Mr. H. N. ALLEN.

[Continued.]

of Indians in the Imperial Service, but he had been led to think it would be so from conversations with members standing high in the Public Works Department.

72,492. He had not recently visited any English colleges or any of the other colleges of India, but in a general way he believed that the Poona college was well up to the average of the Indian colleges, and he believed the new syllabus would be as good as any on account of the fact that it was going to be practical.

72,493. (Sir Murray Hammick.) An apprentice was under probation for one year but he had never known of a man being turned out during this period. That was the only practical work men had before entering the service, except what they did in the college.

72,494. (Mr. Abdur Rahim.) There were two Muhammadan students in the college this year but very often there were none at all. There were no special scholarships for Muhammadans. The cost of the college course was between Rs. 400 and Rs. 500 a year, including travelling expenses. Candidates were selected according to their general qualifications. He preferred a man who had passed the Intermediate Science, but a great many who had passed the Intermediate Arts were admitted, and also some who had passed the Previous Examination, or had been only a year in the Arts college, if they were suitable men.

72,495. (Mr. Madge.) Europeans and Anglo-Indians as a rule went to Rurki because Rurki had been the best college and had laid itself out for Anglo-Indians. Perhaps Poona was not yet quite up to the Rurki standard.

(The witness withdrew.)

At Bombay, Monday, 23rd February, 1914.

PRESENT:

THE RIGHT HON. THE LORD ISLINGTON, G.C.M.G., D.S.O. (Chairman).

THE EARL OF RONALDSKAY, M.P.

SIR MURRAY HAMMICK, K.C.S.I., C.I.E.

SIR THEODORE MORISON, K.C.I.E.

SIR VALENTINE CHIROLO.

MAHADEV BHASKAR CHAUBAL, Esq., C.S.I.

ABDUR RAHIM, Esq.

WALTER CULLEY MADGE, Esq., C.I.E.

FRANK GEORGE SLY, Esq., C.S.I.

HERBERT ALBERT LAURENS FISHER, Esq.

and the following Assistant Commissioners:—

C. C. S. CLARK, Esq., Secretary, Public Works Department, Central Provinces.

J. M. VACHHA, Esq., Executive Engineer, Central Provinces.

R. J. KENT, Esq., Superintending Engineer, Bombay.

J. H. ADVANI, Esq., Executive Engineer, Bombay.

R. R. SCOTT, Esq. (Joint Secretary).

H. B. LEARROYD, Esq., Executive Engineer, Central Provinces.

Written Statement relating to the Public Works Department, being a Memorandum of the views of a Meeting* of the Civil Engineers Association held at Nagpur, Central Provinces, on the 27th July 1913.

72,502. (I.) Method of recruitment.—(i) The present system of recruitment in England only is generally considered satisfactory. There is a disadvantage in recruiting Indians in England as it is not always the most suitable candidates who are willing and can afford to go to England. It is not considered that any particular proportion of Indians should be appointed in any one year. Selection should be left entirely to the Committee if composed as in paragraph 4.

* Members of the Civil Engineers Association who were present at the meeting:—Messrs. R. H. Tickell, C. C. S. Clark, W. B. Starky, J. D. Thomson, E. A. Lagard, G. A. Phear, E. L. Beddy, A. Davison, A. E. Joyce, A. R. Pollard, P. Davies, G. S. Sneyd, and G. H. Forrest.

72,496. Of the forty students who passed out of the college, three obtained guaranteed posts as upper subordinates and three or four entered Government service in other ways; the others went into outside employment.

72,497. The course had been divided chiefly from a consideration of the advantages of special training for the upper subordinates and of a better training for engineers. The four years' course was more expensive and it did not seem fair to put the expense on the shoulders of a subordinate.

72,498. (Mr. Sly.) He did not think that admission to the college or to the Provincial Engineering Service was restricted to statutory natives of India.

72,499. The selection of the first man on the list depended entirely on the final examination and not on a record of work throughout the course. The final examination was wholly theoretical except for drawing and the record of work done in the field.

72,500. There was no system in Bombay, as in Madras, of sending the students out for one year for practical training with private firms, and that would not be necessary in Bombay as there were larger openings for people to get their practical training after they had finished their college course.

72,501. (Chairman.) He did not think it made very much difference whether the marks were given on the final examination or on examinations throughout the general work of the course. As a matter of fact he believed that a very good man was obtained on the results of the final examination.

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Mr. H. B. LEARROYD.

[Continued.]

[v] The maximum age should not exceed 24 years.

[vi] Should the Government of India desire to appoint on the permanent scale any Temporary Engineer in its employ, it would, it is considered, not be unfair to all concerned that he should be brought into the service at such rate of pay as the Government shall deem proper in each case, and that he should receive increments in the same manner as an Engineer who has joined the service in the prescribed manner. Since the incremental scale of pay has been brought in, this would inflict little or no hardship on those already in the Department. The only chance of hardship would be if an officiating appointment were given to a Temporary Engineer, so appointed, to the exclusion of one who was on the permanent scale before he was appointed. Such cases would, however, be very rare, unless the number of temporary men, so brought in, was unduly high. The employment of Temporary Engineers should be reduced to a minimum, as in many cases they hold Divisional charges, in which qualified Assistant Engineers would otherwise be officiating. Moreover it creates a discontented class of men, who have a very real grievance, in that whilst doing the same work as permanent Engineers, they draw no extra pay, and have very precarious prospects. It is also thought that no temporary man appointed in the manner prescribed above should ordinarily be given administrative rank before those who were in permanent employ before he was appointed, nor until he himself has put in at least 20 years' permanent service; in fact he should not ordinarily be allowed to attain administrative rank at all. This would prevent any feeling of discontent among those who have entered the service in the regular manner.

Royal Engineers should only count their service from the time they join the Department, whatever their military rank.

72,503. (II.) System of training and probation.—(i) The most suitable age for a young officer to arrive in India is 21 to 23 years.

(ii) On first arrival, it is desirable that a recruit should be posted to some station of considerable size, where he will have a certain amount of social amenities, and meet men of all ages. He would thus not become narrow-minded or discontented at the outset of his career; would not get an exaggerated idea of his own importance, but get a certain amount of polish.

(iii) It is felt that the present system of Departmental Examination is sufficient, and that Engineers appointed in England attain to an adequate proficiency in the Indian languages. The examination in reading native accounts might well be dispensed with, as the figures can be learned in a short lesson, and are afterwards soon forgotten.

(iv) The opinion of the meeting was strongly against any form of probation. No other department of the Government of India requires recruits appointed by the Secretary of State in England to undergo a period of probation. A proportion of bad bargains in every Department is inevitable. Really bad bargains can be got rid of under code rules if necessary.

72,504. (III.) Conditions of service.—(i) It is desirable that the Engineers of the Department be constituted into a service under some such name as "Imperial Engineers" (I.E.). The term Public Works Department is used by both subordinates and clerks, and consequently cannot be held to distinguish an Engineering Officer. This would only be following the lead set by other Departments, such as the Medical and Forest Services. It is felt that the table of precedence should be revised, so as to give Engineer officers an official status more in keeping with their importance to the prosperity of India.

(ii) All officers should be compelled to retire on attaining the age of 55 years without exception. The relaxation of this rule in recent cases has led to a large amount of discontent.

(iii) The rule which lays down that a Chief Engineer should not ordinarily be allowed to hold the same post for more than five years should allow of no exceptions.

(iv) The cadre should be arranged so that everyone can have furlough or privilege leave whenever it is

due to him. Local Governments should be asked to frame their cadres 5 years in advance and keep them up to date year by year.

(v) An officer transferred from one station to another should be reimbursed the whole of his actual expenses incurred in transporting himself and his family, servants and belongings. Under the present rules, men with families are often severely crippled by the heavy expenses of a transfer. Some officers consider that this hardship could be best remedied by giving each officer on transfer a breaking-up house allowance equal to half a month's pay, in addition to the ordinary travelling allowances due under existing rules.

The present travelling allowances are far too low. They are based on prices as existing in India 50 years ago, when a cart could be obtained for Rs. 12 per month. They are with difficulty now obtained for Rs. 30 per month and the daily rate is usually Rs. 1-4-0. For road journeys the rate should be raised at least 50 per cent. and mileage should be drawn as soon as the number of miles travelled exceeds the equivalent of the daily allowance. For ordinary journeys by rail the present allowance is sufficient.

72,505. (IV.) Conditions of salary.—(i) The system of annual increments in salary meets with general approval.

(ii) Although salaries have recently been increased, it has to be borne in mind that the pay of Engineers is actually less in English money than was the case when Cooper's Hill was founded.

At the time Cooper's Hill was first founded the scale of pay for the rank and file of Imperial Engineers was fixed at—Assistant Engineer, 2nd grade, Rs. 350 up to Executive Engineer, 1st grade, Rs. 900, per mensem.

At that time these sums, respectively, represented £420 and £1,080 per annum. Even in 1883, when the rupee stood at one shilling and eight pence, they represented £350 and £900.

The pay of the newly joined Imperial Assistant is now Rs. 380 and of the Senior Executive Engineer Rs. 1,250 corresponding at the present rate of exchange to £304 and £1,000 per annum. But from these sums there are deductions on account of income-tax, which were not imposed until about 1885. The pay now, after deduction, amounts to only £296 and £974, respectively. Thus the pay given now, when measured by English money, is actually less than was considered fair 40 years ago. And in the case of newly joined Assistants less than they received 30 years ago, although it is admitted on all sides that the cost of living in India has nearly doubled.

Hence it would appear that when the salaries of the Public Works Department were readjusted they should have been raised to a level which would represent in English currency 50 per cent. more than they did when Cooper's Hill College was first founded.

As salaries have been so recently raised (in rupees, not in pounds) it would of course be useless to ask for any further increase now, but the above is pointed out in support of the recent memorials submitted for increased pensions.

(iii) The rule introduced in the Government of India's Resolution of the 15th May 1912 by which an officer cannot draw more than Rs. 800 per month under the system of annual increments till he is appointed to a Divisional charge, will bear very hardly on some officers, and should certainly be rescinded in the case of those officers who are reported on as fit for a Divisional charge. It is not right that the annual increments of an efficient officer, who is reported on as fully qualified for a Divisional charge, should be stopped, not on account of any fault of his own, but solely due to erratic recruitment.

(iv) Similarly, many Executive Engineers, reported on as fully qualified for administrative rank, will be unduly held back at Rs. 1,250 per month, merely because of errors in recruitment. There is a strong feeling that Executive Engineers, who are certified as fit for administrative posts, should have their pay increased beyond Rs. 1,250 per month by annual increments of Rs. 50 per month up to a maximum of Rs. 1,500 which they would thus attain after a minimum of 24 years' approved service.

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[Continued.]

(v) Promotion to Chief Engineer, 1st Class, becomes so badly blocked at present, that many specially deserving officers never obtain a chance of promotion to the higher rate of pay. It is felt that there should be only two classes of Superintending Engineer and one class of Chief Engineer, as for Commissioners of a Division in the Indian Civil Service.

The rates of pay of administrative ranks should be—
Engineers whether appointed in England or not—

	Per month. Rs.
Superintending Engineer, 2nd Class ...	1,750
Do. do. 1st Class ...	2,000
Chief Engineer ...	3,000

and a Secretary to a Local Government or Administration should get a local allowance of Rs. 250 in addition, as at present. The number of Superintending Engineers in the 1st Class should be the same as in the 2nd Class.

The pay of a Chief Engineer is often compared to that of a Commissioner. This is not a fair comparison as Commissioners can rise to higher posts and Chief Engineers have the charge of a large department.

72,506. (V.) Conditions of leave.—(i) The amount of leave allowed under the existing rules is generally considered sufficient, but it is sorely felt that it is impossible to take as much furlough as is desirable for proper health, owing to the smallness of the furlough allowances. The present allowance is barely a subsistence allowance for a junior officer, and leaves no margin for expenditure in attending professional lectures or visiting Engineering works. An officer, who is keen on improving his professional qualifications and bringing his knowledge up to date in European practice, is thus discouraged. At present the most junior Royal Engineer Officer in the Department gets a leave allowance, which a Civil Engineer can only hope to reach after eighteen years' service.

It is unanimously urged that the leave allowances should be revised so that an officer on furlough or special leave will draw half his substantive salary, subject to a minimum of £500 a year.

(ii) The opinion is also strongly expressed that it should be open to every officer to take all the privilege leave which he has earned, at any time during his service, when he can be spared. It is unjustifiable that an officer should be penalised because he cannot be spared, or because, in his keenness for his work, he may prefer to see his job through instead of applying for leave when three months' happen to be due to him. Privilege leave once earned is as much due as an officer's pay, and the rules should be framed in such a manner that it can never be lost to him.

(iii) Furlough cannot be taken till an interval of not less than 18 months has elapsed since last return from privilege leave of over six weeks' duration. This rule should be relaxed, as it discourages an officer from taking privilege leave in India, when it may be very necessary for his proper health.

(iv) A proposal which is unanimously urged is that an officer on furlough should be allowed to draw double furlough allowances for half the period of furlough which is due to him. For instance, that an officer with twenty months' furlough due to him should be allowed to take ten months' furlough on double the ordinary furlough allowances, and end up with no balance of furlough due to him, or to take any less period, say, six months, on double the ordinary furlough allowances, and end up with a balance of eight months (twenty months less twice six months) still to his credit.

He should also be allowed to take leave of any kind without restriction whenever he can be spared.

(v) It is felt that no useful purpose is served by the rule which lays down that an officer must have rendered eight years' active service before he can be granted furlough. It would be in the interests of the service to give a junior officer an opportunity of recruiting his health, or of renewing his acquaintance with the progress of his profession, by allowing him to take furlough after four years' active service.

(vi) Similarly, it is felt that private employment during furlough should not be prohibited, as it would

give a keen officer an opportunity of gaining experience to the interests of the service.

(vii) Opinion is unanimous that the rules for the grant of study leave to officers of Scientific and Technical Departments should be extended to officers of the Public Works Department. Engineering is a progressive science, and it would be to the advantage of Government if officers were allowed periods of study in order to keep abreast of modern developments.

72,507. (VI.) Conditions of pension.—[i] The greatest grievance of the Department, and one which is sorely felt, is the totally inadequate pension to which officers become entitled on retirement under existing rules. The present pensions are actually less than they were forty years ago, and when the higher qualifications now required from men joining the service, and the general rise in the cost of living are taken into consideration, they compare still more unfavourably than the actual figures indicate. It is strongly urged that the memorials on this subject, recently submitted by a large majority of the officers of the Imperial Service, should receive early and favourable consideration. Numerous memorials on this subject have been submitted during the last six years, and the delay in the issue of final orders on the case has given rise to a considerable amount of discontent.

The Engineer appointed in England is expected to live in the same style as the Royal Engineer and the Doctor, and there is no reason why he should be able, on retirement, to arrange his home menage on a more economical scale than they. He claims equal treatment from Government in the way of pension.

[ii] Article 4 of the Civil Service Regulations lays down that an officer's claim to pension is regulated by the rules in force when he retires. In view of the delay in the issue of final orders on the memorials already submitted, it is urged that this rule should be held in abeyance in the case of those men who are compulsorily retired before final orders are issued.

[iii] The scale of invalid pensions is meaningless at present owing to the absurdly low maxima limits prescribed, and opinion is unanimous that the maxima limits, as laid down in Article 641, should be revised to agree with those shown in Article 474 of the Civil Service Regulations.

[iv] A large majority of the Engineers appointed in England consider that a family pension scheme should be started, and that Government should bear a portion of the cost. Pension has been officially laid down to be deferred remuneration, and consequently it is clearly the duty of Government to reimburse this deferred remuneration to his family in all cases when an officer dies before he has drawn it all in the shape of pension. The majority of men are willing to contribute 6½ per cent. of their salaries towards a Family Pensions Fund, and it is felt that Government should also contribute an equal amount. With this datum, the amount of family pensions, payable in the event of an officer dying, shall be worked out on an actuarial basis, allowing 5 per cent. per annum compound interest. Bachelors would subscribe at the same rate as married officers with families, and as a set-off they might be allowed to make voluntary subscriptions to a Provident Fund, and receive 5 per cent. compound interest thereon. An alternative suggestion is made that Government should start pensions for families on the same lines as those at present in force for the Civil Service.

[v] Other departments might be communicated with to take similar action with regard to pensions.

72,508. (VII.) Division of services into Imperial and Provincial.—(i) It is undesirable to lay down definitely that certain fixed Divisional charges, or even a fixed proportion of Divisional charges, should be reserved for Provincial Engineers, as laid down in the Government of India Resolution of the 24th April, 1908. Provincial Service Engineers, being borne on the same list as Imperial Service Engineers, the appointments to Divisional charges should be by section only.

(ii) It is felt that, in the interests of efficiency, the proportion of the imported Engineers in the service should be for the present not less than 66 per cent.

(iii) It is considered that the Imperial and Provincial Services should be borne on separate lists as

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[Continued.]

in practically all other Departments until such time as members of the Provincial Service attain administrative rank, when they will be borne on the Imperial list.

Supplementary Memorandum by Mr. H. B. Learoyd.

72,509. (VII.) Such limitations as may exist in the employment of non-Europeans.—Under the present system, the Imperial Service is recruited only in England and the Provincial Service entirely in India. Non-Europeans, practically speaking, can only enter the Provincial Service. As a matter of fact during the 18 months from January, 1911, to June, 1912, 13 European Imperial Engineers were appointed in England and one non-European. As the Provincial Service is open to non-Europeans it does not seem desirable to alter this, especially as it is possible for a non-European to be appointed in England to the Imperial branch. There is no distinction between the Provincial and Imperial Services except in the matter of pay, and it is felt that statutory natives of India

employed in their own country and under climatic conditions, to which they have been accustomed from their youth, should not draw the same pay as Englishmen appointed by the Secretary of State who have to work in a foreign land far removed from their relatives and friends, whom they can only visit at rare intervals at great expense, and in a climate notoriously trying to their constitutions.

72,510. (VIII.) Relations of the service with the Indian Civil Service and other services.—The relations of the service with the other services are generally satisfactory. It is felt that the Public Works should be a service in reality and not a Department. There is perhaps a tendency to rank Subordinate officers of the Department below subordinate officers of other Departments. For instance, an "Upper Subordinate" of the Public Works Department drawing a salary of Rs. 400 a month has neither the standing nor the dignity of an Extra-Assistant Commissioner drawing less pay. The one is a "Subordinate" and the other an "Officer."

Mr. H. B. LEAROYD, called and examined.

72,511. (Chairman.) The witness, an Executive Engineer of the Jubbulpore Division, represented the Imperial Engineers of the Central Provinces and had been in the service for sixteen and a half years.

72,512. The present system of recruitment was generally considered satisfactory. There was no objection to the ten per cent. of Indians now recruited in England being recruited in India, but unless there was a residential college in India probably the present form of recruitment was the best that could be obtained.

72,513. He was in favour of two distinct branches: Imperial Engineers recruited in England and a Provincial Service recruited in India. The indigenous engineer ought not to be quite on the same lines as the imported engineer. He would not object to the Imperial and Provincial Services being abolished if appointments were made by selection to the higher posts and the difference in pay now obtaining between the services were continued. The European serving in India should be granted something in the shape of a foreign allowance. There was some dissatisfaction in the ranks of the Provincial Service. The Provincial Service officers were doing practically the same work as the Imperial officers, and he would be prepared to extinguish any anomalies that might exist provided there was a differentiation of pay between the foreign recruited officer and the officer recruited in India.

72,514. There were twenty-eight temporary engineers in the Central Provinces, and if any were taken into the permanent cadre they should be brought in at the bottom of the list. The same principle should be applied to the Royal Engineer. At present the Royal Engineer was allowed to count as much as two and a half years of his Royal Engineer Service and this brought him in senior to men of the same age than himself. There were five Royal Engineers at present in the service, but none had been recruited for a long time. Some of the temporary engineers might be regarded as more or less permanent men. Most of them were employed on irrigation works and buildings and roads, both in maintenance and construction.

72,515. A good deal of constructional work on roads in the Central Provinces was done by contract under the supervision of the department, but the department had to prepare all the estimates and measure up the work. The contracts were not the same as contracts in England, and no work was done by contract in that way.

72,516. He objected to a probationary period as it did not give a man security when he first came into the service. If a man proved unworthy there were always means by which he could be got rid of. A probationary period might affect recruitment, as a man would probably object to entering a service and being sent out to India on the understanding that if he was not suitable he would be sent back after a year.

72,517. All officers should be compelled to retire on attaining the age of fifty-five. There should be no

exception even in the interests of the service, because extensions pressed very hard on other men. If there was any question as to men being suitable for employment at that age he would rather raise the age of retirement than have an exception to any rule.

72,518. With reference to the suggestion that an officer on furlough should draw half his substantive salary, subject to a minimum of £500 a year, it might very well happen that sometimes an officer would be receiving higher pay on leave than when on duty, but that frequently happened in other services, especially in the I.C.S., where an officer early in his service received more pay on leave than when working. He would not press absolutely for £500 a year, but there should be a minimum, as an officer who was forced to take leave on medical certificate in the first year or two of his service did not receive a living wage. He would not press for the adoption of any principle which enabled an officer to receive more pay on furlough than on duty. A good many officers were in favour of drawing double allowance for half the period of furlough, but personally he was not in favour of it, as it was possible that an officer at the end of twenty years would have taken far more furlough than he ordinarily would and it would count against his pension; it would also result sometimes in an officer on furlough receiving more than an officer on deputation.

72,519. The officers asked for improvements in salary, for a considerable increase in pension, and for a family pension fund to which Government subscribed. They did not press for an increase in pay as Government had given an incremental scale in 1908. What they desired most was an improvement in the pensions.

72,520. Increases in the cadre were required for permanent work. He knew nothing about the irrigation branch, but for work on roads and buildings the department was understaffed. The expenditure on works taken in hand during the last six or seven years was far more than before, and at present Assistants were doing Executive Engineers work and sub-divisions were being held by subordinates. A good deal of work had to be done in connection with estimates, and if contractors were employed a large staff would not be needed; but he did not think it was practical in the Central Provinces to employ contractors, because there were no large firms, and he doubted whether the Bombay and Calcutta firms would take up the construction of bridges or roads in the Central Provinces. Firms would tender for the supply of girders, but would not erect them. If they could be promised works amounting to some lakhs of rupees in some fixed centre they might be prepared to take contracts up, but at present the amount of work was very small and the work itself was very scattered.

72,521. (Sir Murray Hammick.) If the ten per cent. rule for the recruitment of Indians in England still continued probably Indians so recruited would have to be given the foreign allowance. It would be

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awkward to have Indians recruited in England drawing the allowance and doing the same work as Indians recruited in India, but he did not see how it could be avoided.

72,522. He did not think that the payment of passages, to England and back would in any sense be equivalent to the grant of more pay on furlough. It would be much better to have a fixed minimum furlough allowance. The difficulty of an officer using up his furlough might possibly be met by only allowing him to commute up to six months, and it was no doubt better to have a number of short furloughs than a few long ones.

72,523. (Sir Valentine Chirol.) If the State considered it absolutely necessary in the public interest to keep a man on after the age of fifty-five he should be retained as additional to the cadre, but even then he would block promotion by holding a post which another officer ought to have. No doubt the State had full value out of a man by the time he had reached fifty-five.

72,524. (Mr. Abdur Rahim.) If a Superintending Engineer was kept on after fifty-five outside the cadre it would mean doubling the establishment.

72,525. There was dissatisfaction among provincial men with regard to the disparity of pay, and he did not see why that dissatisfaction should not be removed by granting the extra pay to the English recruited men in the shape of a foreign allowance. It was simply changing the designation, but he could not see why provincial engineers should object to it. Foreign imported labour was always paid more than indigenous labour. A Civil Engineer, doing exactly the same work as a Royal Engineer, received less than the Royal Engineer, though the difference in the pay was not so great as it was between the Imperial and Provincial Services.

72,526. (Mr. Madge.) Recruitment might be affected by a period of probation in India. It might happen that a man on coming out would find he was not fitted for the work and wished to go away, and in that case a period of probation would be of value.

72,527. Local Governments should calculate the recruits they required up to five years ahead and recruit accordingly, and he believed the principle of anticipating vacancies had been urged by the department.

72,528. He did not know very much about the supervision of contracts in England, but the supervision in India on the part of the department was very strict. The department prepared designs and estimates and supervised the work very carefully. He did not think a contract on the basis of an English contract would ever be possible in the Central Provinces.

72,529. The cost of living had increased largely in India and the pay of to-day was less than the pay of forty years ago.

72,530. (Mr. Fisher.) Twenty-four was the best age for men coming out to India; by that time students in the Universities in England would have obtained their academic training, though perhaps they would not have had any practical experience. He attached some importance to practical experience on works, which might now be given in India as there were a number of large works in the country. A man would get just as valuable experience on a project like the Sara Bridge as he would in England. He would not lay down any hard and fast rule that a man should have practical experience in England.

72,531. He did not favour a competitive examination for entry to the Imperial Service. There should be certainly some element of selection, but that selection might come before or after the examination.

72,532. The posting of recruits to a station of considerable size would not involve expense as some of the smaller stations were more expensive than the large stations, and a recruit had far more chance of seeing large works in the bigger stations.

72,533. In the Central Provinces most of the work was done by comparatively small contracts. He himself spent about seven lakhs a year on works, but the money was not expended on a given work in a given

year; there was one large work going on now the total expenditure on which would be about seven lakhs, but only about two lakhs was being spent in the present year.

72,534. (Mr. Sly.) He was afraid he could not say anything that would justify the recommendation that when an Indian became a Superintending Engineer he should have the same pay as the Imperial Engineer.

72,535. While he was in favour of permitting an officer to take up private work during furlough in England he was not in favour of allowing that course when furlough was taken in India. One of the reasons for suggesting private employment in England was that the furlough allowances were so small that a man might be allowed to add to them, and another reason was that in private employment he could obtain some special knowledge that would be of value to his work in India. Study leave would not meet the second point as no allowances were paid beyond bare railway-fares.

72,536. In the Central Provinces direct recruits to the Provincial Service were appointed from Rurki; there had been cases of appointments from the subordinate service but that was not general, and they had been generally appointed towards the end of their service. He preferred the young, direct recruit, as the promoted man was hardly the class of man required. A period of service in the subordinate ranks was not a good form of training for the Provincial Service.

72,537. (Mr. Chaubal.) The value of selection was that it brought to light qualities that were not discoverable by examination. A man might be an excellent engineer but a very bad executive officer. The qualities which an engineering officer should possess might very well be ascertained by a selecting board before an examination, and he would have no objection to the selection of candidates before the examination.

72,538. (Sir Theodore Morison.) An Englishman who was serving in a foreign country, far from his friends, his associations, and his home, and had to send his children to England to be educated, naturally deserved something in the shape of foreign allowance. On the supposition that the Commission would recommend that the salaries in the Imperial branch should be raised by 25 per cent. on condition that the Indians in the Provincial Service also received the same pay, naturally the officers would prefer the 25 per cent. rather than remain on the present scale. *Qua* service it did not affect the officers whether the Indians were paid the same or not. The only ground on which it could be advocated that Indians should be paid less was that of the general financial interests of the State, that it was unnecessary to pay them more because they could be obtained for less, but that had nothing to do with the Englishmen in the service. The Imperial officers were not asking for a rise of pay; what they claimed was that if the Provincial pay was raised the Imperial Service should have a rise also.

72,539. (Lord Ronaldshay.) The Englishman in India paid taxes and he therefore had a certain interest in the economical administration of the various Public services.

72,540. A man could take furlough at the end of eight years when he would be drawing Rs. 660 and his furlough allowance would be half the average salary of the past three years, and in a way that was really a minimum furlough allowance. The point really was not that there was not a minimum, but that the minimum was not high enough. There was, however, no minimum for furlough on medical certificate, although the furlough counted for pension.

72,541. (Mr. Clark.) It was not possible for the class of contractors found in the Central Provinces to prepare estimates and drawings. The chief requirement in the Central Provinces was a permanent engineering staff. The sanctioned cadre was now forty-eight, including three for Central India, and the Central Provinces Government in their memorandum on the Public Works Department stated that sixteen additional officers were required besides a proportionate number of subordinate staff. Applications

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had been made to the Government of India for more permanent engineers, but the increase had not been sanctioned. It was very important that the application should receive early attention.

72,542. (Mr. Vachha.) He did not know what the proportion of Indians at present in the service was, but he did not think there were too many in the cadre. He desired to recruit the Imperial Service in England because higher educational qualifications could be secured there. If it were possible to get in India public schools run on exactly the same lines as those in England he would be quite prepared to have recruitment in India.

(The witness withdrew.)

J. H. SHARPE, Esq., Executive Engineer, Central Provinces.

Written Statement relating to the Public Works Department.

72,546. **INTRODUCTORY.**—“The Provincial Engineer Service,” as it is now termed, is a misnomer. It is in reality an integral part of the Imperial Service, with the sole difference that it is recruited in India. It has not come into existence as something new in the same way as the other Provincial Services of India; it has sprung out of an older service which originally constituted the Imperial organisation of the Public Works Service. That Service, indeed, represents Indian training and experience of half a century during which period its members, whether recruited in England or in India, were welded together in close union and their united hands guided from inception to fruition works of magnitude and importance such as were never before chronicled in India or even out of it. The achievements of the products of Indian Colleges of the past have naturally stimulated the efforts and ambitions of the later products of the present day; and to those efforts and ambitions must be attributed the persistent appeal for special treatment with which the Government of India have been approached in recent years.

The speeches of Sir William Muir of November, 1873, and of Sir Antony MacDonnell of November, 1900, extracts from which have figured so largely in the Memorials submitted by the Provincial Service Engineers, have brought into prominence the fact that the Rurki College of India has been recognised as one which imparts instruction, both theoretical and practical, up to the standard of any similar institution in Europe, and that the late Cooper's Hill College was never intended to affect in any degree the relations of the Government of India with the former Seminary. The Government of India Resolution No. 2112-G of 1892, introducing the Provincial Engineer Service, moreover, declared that except in the matter of pay, leave, and pension, “there shall be no distinction between the members of this service and those of the Imperial Service.” Its members, unlike the members of the recently created Provincial Services of other Departments, perform the same duties and rise to the same positions as their Imperial confrères; and yet they draw reduced pay and emoluments exactly in the same way as the other Provincial Services.

The main problem before the Public Services Commission is—how* to reconstitute the Imperial and Provincial Services of the Public Works Department so as to restore to the Indian recruited Engineers their original status and prestige and at the same time to bring the Provincial Branch of the Public Works Department into line with the Provincial Branches of other Departments. In order to arrive at a proper solution of this problem I would respectfully entreat the Royal Commission to accord full and sympathetic consideration to the methods of recruitment, system of training, and conditions of service suggested in the enclosed Memorandum. The Memorandum gives expression to the unanimous opinions of not only the so-called “Provincial” Engineers, but also the “Imperial” Indian Engineers of these Provinces, whether recruited in England or in India. In order to indicate how widely these views are shared by Indian Engineers I beg leave to give below the

72,543. The fact that European engineers appointed in India held a larger proportion of higher posts than European engineers appointed in England might be explained by the fact that Rurki was opened before Cooper's Hill and more Rurki men were appointed in earlier days.

72,544. Royal Engineers received more pay than Civil Engineers as they started on Rs. 420 as against Rs. 380.

72,545. There was no particular objection to men entering at the age of twenty-five, but twenty-four was a good age and would give a man thirty-one years' service.

names* of the officers who have accepted the Written Statement herewith submitted.

72,547. **(I.) Methods of recruitment.**—It is desirable that all superior services should as far as possible, be modelled on the same lines as regards modes of recruitment, salaries, pensions, &c. (*vide* Main Head VIII). The superior service of the Public Works Department may be divided into two branches:—(A) *Imperial* for the higher executive and administrative appointments corresponding to the Covenanted Civil Service; and (B) *Provincial* for all the other executive appointments corresponding to the Provincial Civil Service.

The method of recruitment should be as described below.

A.—*Imperial Service.*—(i) The Imperial Engineers will be recruited partly in India and partly in England in the proportion of 2 to 1, that is to say, two-thirds of the number of vacancies in every year will be filled by recruitment in India and one-third in England. From the last Government of India Classified List (corrected up to 30-6-12) it would appear that out of a total of 203 Engineers recruited in India, 100 are Europeans and 103 Indians. There is no likelihood of Indians swamping the Department as the proportion of Indians and Europeans among the local recruits will be about equal and the total European element in the Imperial Service, including European officers drawn from England as well as those drawn from India, will always remain at a very high level.

(ii) The recruitment will be by means of an open competitive examination, which has always been the rule in the Indian Colleges and which was also the rule in the Cooper's Hill College for many years. There should be no nomination or selection in any form. Every candidate must produce certificates to show that he belongs to a respectable family and that he bears a good moral character.

(iii) There should be certain recognised Engineering Colleges and Universities in Great Britain and Ireland and in the Colonies, graduates or superior diploma holders from which (provided they are His Majesty's subjects) may be admitted to an open competitive examination held in London every year. Appointments will be made in the order of merit from the successful candidates to the extent of the number of vacancies during the year.

(iv) Similarly there should be certain recognised Colleges in India, graduates from which (including

* Indian Engineers recruited in England: Mr. A. B. Madappa Executive Engineer, Karun Division. European Engineers recruited in India: Mr. J. H. Sharpe, Executive Engineer, Hoshangabad Division. Indian Engineers recruited in India: (a) *Imperial*—Mr. R. Mitra, Superintending Engineer, Second Circle, Central Provinces; Mr. P. C. Lall, Executive Engineer, East Berar Division; Mr. J. M. Vachha Executive Engineer, Eastern Division; Mr. J. M. Ray Executive Engineer, Bhandara Division; Mr. M. Ramaya, Executive Engineer, Chanda Division; Mr. N. N. Mukerjee, Executive Engineer, Mahanaddi Division. (b) *Provincial*—Mr. B. C. Dube, Executive Engineer, Akola; Rai Sahib Prayagdas, Assistant Engineer, Balaghat; Mr. H. R. Tandan, Officiating Executive Engineer, Mandla Division; Mr. Sunderlal, Assistant Engineer, Jabulpore; Rai Sahib Purnottam Razvi, Officiating Executive Engineer, Yeotmal; Mr. Kanewar Lal Jhanji, Assistant Engineer. (c) *Temporary Engineers*—Messrs. M. S. Murzaban, Shivadasani, Chowa Lal Pradhan, G. B. Chandiramani, N. C. Bhattacharya, and Jhandamul and Rai Sahib S. N. Bhaduri.

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subjects of Native States) may be admitted to an All-India open competitive examination held in Delhi every year. Appointments will be made from the successful candidates in the order of merit to the extent of the number of vacancies during the year.

(v) The examinations held in London and in Delhi need not be simultaneous; the standards of both the examinations must be identical and they should be held about the same time. This will practically be a revival, in a modified form, of the old system of recruitment from Cooper's Hill and Rurki.

(vi) The age of the candidates should be not below 23 and not above 25. Those recruited in India will be made to serve a probationary period of two years in England and those recruited in England will serve a similar probationary period, partly in England and partly in India. This point is more fully dealt with in paragraph 72,548.

B.—Provincial Service.—(i) Provincial Engineers should be wholly recruited in India. Each Government will recruit direct from the Engineering College within the Province, or, in the absence of a local College, from the Engineering Colleges in the neighbouring Provinces, to which local students may be encouraged to go with a view to compete for the Public Works Services. Appointments should be made in the order of merit from the successful Engineering graduates to the extent of the number of vacancies during the year.

(ii) In order to give an opportunity to the successful candidates of the year to compete in the examination for the Imperial Service, the Provincial recruitment will take place after the results of the former examination are declared.

(iii) The Provincial Engineers will be placed on the same footing as the Provincial officers of other Departments and will be styled Extra-Assistant Engineers, similar to the Extra-Assistant Commissioners and Extra-Assistant Conservators of Forests. The present grades of Sub-Engineers in the Public Works Department will be entirely abolished and will merge into the class of Extra-Assistant Engineers.

General.—Any medical examination or other test which may be deemed necessary in order to ensure the fitness of a candidate for the Public Works Services must be held prior to the competitive examinations, after which there should be no further disqualification.

There will be no promotion from the Provincial Branch to the Imperial Branch; nor is there any necessity of having "Listed Posts" for the Provincial men, as they are not ordinarily intended to hold the higher executive charge of Divisions. In exceptional cases men from the subordinate ranks (Supervisors) may be promoted to Extra-Assistant Engineers, in the same way as exceptionally good Tahsildars are occasionally promoted to Extra-Assistant Commissioners. Such promotion, however, should be an exception and not the rule.

There should be no class or race representation in the Public Works Services, Imperial or Provincial. If in the view of Government there are any backward classes whose advancement ought to be accelerated, special facilities in the way of scholarships may be given to them at the various stages of their education in order to enable them to qualify themselves for the Public Works Services in due course.

The constitution of the Public Works Services outlined above may be summarised thus:—

A.—Imperial Service.

(a) Imperial Engineers recruited by open competition in India.

(b) Imperial Engineers recruited by open competition in England.

B.—Provincial Service.

(a) Extra-Assistant Engineers recruited by open competition from the Engineering Colleges.

(b) Extra-Assistant Engineers promoted (in exceptional cases) from the subordinate ranks (Supervisors).

Absorption of the members of the present Provincial Service.—In the event of the above scheme being adopted, the officers of the existing Provincial Service should be placed under Class A, as they are already listed with the Imperial Engineers, their pay being

two-thirds of the pay of the Imperial Engineers. The distinction in pay should vanish on these officers attaining to the executive ranks. The selection of an officer for the assumption of the higher executive charge of a Division must be regarded as a sure test of his equality with the Imperial officers. An officer so selected has to move freely among the District and Divisional officers and it is in the highest degree desirable in the interests of public service that he should receive the same pay and emoluments as an Imperial Engineer, so as to be able to maintain his dignity as the principal officer of the Public Works Department in the Division filling a high post of trust and responsibility.

Temporary Engineers may be recruited from qualified Engineering graduates, only in exceptional cases when the permanent staff is unable to cope with any sudden rush of work. They should be employed only in positions held by Extra-Assistant Engineers and in no case should they be put in charge of Divisions. In cases of emergency Divisional charges may be temporarily held by Extra-Assistant Engineers, but not by Temporary Engineers. As a rule Temporary Engineers should not be kept in service longer than five years, within which period it should be possible to strengthen the permanent service suitably so as to meet the permanent growth of work, if any, in the Department. Should at the present moment there be any Temporary Engineers who are qualified Engineering graduates or superior diploma holders and have now been working continuously for over ten years, and who in the opinion of Government are fit to be made permanent, they may be brought on the list of Extra-Assistant Engineers before new recruits are admitted.

There should be no limitation upon the employment of Temporary Engineers chargeable to Works, so long as the main provisions of the Public Works Department Code, Vol. I, paragraphs 795 and 796, are fulfilled. This will not add to the Establishment charges, Permanent or Temporary. Any expenditure on this head will be met from Works, and its existence, continuance, growth and cessation will entirely depend upon the works themselves.

72,548. (II.) System of training and probation.—As already stated the Imperial Engineers, after appointment, will undergo a course of practical training for two years on some large construction works. Those recruited in India will spend the whole period of their training in England and those recruited in England will spend the first year in England and the second year in India. The training in England will be conducted by a stipendiary Superintendent appointed by the Secretary of State, who will act under the Advisory Board consisting of one of the Indian members of the Indian Council as President and three members (all appointed by, and receiving an honorarium from, the Secretary of State) as follows:—

(1) One member of the Council of the Institution of Civil Engineers.

(2) One retired Engineer officer of the Public Works Department not below the rank of Superintending Engineer, and

(3) One Engineer officer of the Public Works Department of not less than 15 years' service on long leave in England.

The Superintendent will arrange to article each recruit under a professional Engineer, who will afford him every opportunity of training himself on large construction works.

The training in India for the English recruit will be arranged by the Chief Engineer of the Province to which he may be posted. It would be desirable to place him, if possible, in the hands of superior Indian Officers (Superintending Engineer and Senior Executive Engineer) so that he may work amidst Indian surroundings of a high quality, in the same way as the Indian recruit will be trained amidst English surroundings. In every case a report on the recruit's work during the year under training, briefly stating how he was employed and how far he has made use of his opportunities, will be furnished to the Government under which he may be posted. The recruits should be consulted as to the class of work on which they desire to be trained, and as far as practicable the training might be arranged in accordance with their inclinations.

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During the period of training each Assistant Engineer may be paid a salary of Rs. 300 per month in the first year and Rs. 340 per month in the second year. A sum of Rs. 1,000 will be paid to each recruit from India to cover his passage and the premia he may have to pay to the Engineers to whom he will be article and travelling expenses, &c. The recruit from England will be provided with a free passage to India as now, and will draw travelling allowances in India under the ordinary rules. The date of appointment to the Department will be the same for both classes of recruits, a month's time being allowed from that date to join the place of training. Within three years after the period of training is over each Assistant Engineer will be required to pass a Departmental examination in languages and professional subjects as laid down in the Public Works Department Code at present.

72,549. (III.) Conditions of service.—The conditions of service, salary, leave and pension will be the same for all Imperial Engineers whether recruited in India or in England. Those for the proposed new Provincial Engineers or Extra-Assistant Engineers will follow the lines laid down for the Provincial Civil Service.

The rule for retirement at 55 years should be rigidly enforced, no exception being made in any case. An officer considered unfit for promotion to Superintending Engineer may be asked to retire at any age between 50 and 55, provided he is given the full pension (i.e., $\frac{2}{3}$ of average emoluments, *vide* Main Head VI).

As regards the rule (*vide* Government of India, P. W. D., Resolution No. 25 of 15th May, 1912) under which no officer can draw more than Rs. 800 a month unless he holds a Divisional charge, it should be made clear that an Executive Engineer already drawing more than Rs. 800 a month will not have his pay reduced under this rule in case there is no Divisional charge to which he can be posted.

The annual recruitment of Imperial Assistant Engineers must not exceed what is necessary to fill the casualties in the higher executive and administrative grades. In this way no more Assistant Engineers ought to be ripe for promotion than there will be room for in the executive ranks. The Sub-Divisional charges will be mainly held by Extra-Assistant Engineers. With a suitable readjustment of charges, both Divisional and Sub-Divisional, and with judicious decentralisation of authority, the bulk of the executive work should be performed by the Provincial Staff, the duties of the Imperial Staff being confined to the higher executive and administrative functions.

72,550. (IV.) Conditions of salary.—On the representations submitted by the Public Works Department officers the Secretary of State was pleased to sanction increased salaries on an incremental scale in 1908. For the present that scale appears to be adequate for the Imperial Service. If, however, after reaching the highest salary of the Imperial Service an Executive Engineer who is considered fit for promotion is not raised to Superintending Engineer grades within three years, he should be entitled to an annual increment of Rs. 50 from the fourth year, subject to the condition that the maximum salary thus obtained shall not exceed Rs. 1,400. The scale of salary for the proposed Provincial Engineers or Extra-Assistant Engineers should be made identical with that for the Provincial Civil Service.

The travelling allowance admissible on transfer is universally recognised to be inadequate. Actual expenses should be paid, limited to three times the railway fare or road mileage ordinarily allowed for touring. Actual charges for the carriage of furniture and personal effects should be allowed, subject to a limit of one wagon load by rail and 20 cart loads by road. Training of one trap and two ponies should also be made permissible.

72,551. (V.) Conditions of leave.—The Government of India have under consideration a scheme for the simplification and improvement of the leave rules of both the European and Indian services. They can, however, be still further simplified by having only one set of rules for all the services, Imperial or Provincial. It is recognised that climatic conditions may necessitate more leave in the case of Europeans than in that of Indians. But there seems to be no reason to sup-

pose that, given equal opportunities, the Indians will avail themselves of the leave rules more freely than they have been doing hitherto, and that they will thereby put Government to extra expense. It is only in a real and pressing case of necessity that an Indian officer will take advantage of the better "Long Leave" rules, and the amount of long leave actually taken is not likely to undergo any substantial change. Any differentiation would, therefore, merely create discontent without leading to any corresponding gain to Government.

The leave allowances are altogether inadequate. The maximum was fixed in the old days when the salaries were poorer in comparison with the present scale. The leave allowances on furlough should be equal to half of average salary subject to a maximum of £800 if paid in England and Rs. 12,000 if paid in India for all services.

It is desirable to introduce two modifications in the leave rules which do not at present find place in the scheme under contemplation:—

(a) Privilege leave may be allowed to accumulate up to a maximum of 6 months.

(b) Furlough up to a maximum of 2 years in the whole service may be allowed on full pay in lieu of 4 years ordinary furlough.

It seems pretty certain that if these concessions are granted, no Indian officer will, save under very exceptional circumstances, take furlough for a longer period than 2 years in all his service.

In counting leave towards pension there should be no difference between periods spent in India and out of India, *vide* Civil Service Regulations Article 408.

72,552. (VI.) Conditions of pensions.—The pension rules should be uniform for all Imperial Engineers whether recruited in India or in England. Those for the Extra-Assistant Engineers will follow the lines of the Provincial Civil Service.

The following should be the scale of pension for the Imperial Service:—

Ordinary Pension.

Years of completed service.	Scale. (60ths of average emoluments.)	Maximum limit.
		£ Rs.
10	20	133 $\frac{1}{3}$ or 2,000
11	21	146 $\frac{2}{3}$ or 2,200
12	22	160 or 2,400
13	23	173 $\frac{1}{3}$ or 2,600
14	24	186 $\frac{2}{3}$ or 2,800
15	25	200 or 3,000
16	26	230 or 3,450
17	27	260 or 3,900
18	28	290 or 4,350
19	29	320 or 4,800
20	30	350 or 5,250
21		380 or 5,700
22		410 or 6,150
23		440 or 6,600
24		470 or 7,050
25		500 or 7,500
26		540 or 8,100
27		580 or 8,700
28		620 or 9,300
29		650 or 9,900
30 and above		700 or 10,500

Special Service Pension.—An additional special pension of £40 or Rs. 600 for each year of completed service in the administrative grades.

The rate of conversion from English to Indian currency and *vice versa* should be taken to be £1 = Rs. 15.

An officer should be allowed to voluntarily retire after 20 years' service.

72,553. (VII.) Such limitations as may exist in the employment of non-Europeans.—Under the present system the Indians as well as Europeans who have settled in India are practically shut out from the Imperial Service which is wholly recruited in England. When the admission was by open competitive examination from the Cooper's Hill College without any restrictions, Indian students of merit could go to England with some certainty of success. A few Indians did, indeed, get into the Imperial Service through its doors. But since the days of nomination the uncertainty has been so great that no Indian

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student ventures to go to England with the definite idea of seeking an entrance into the Public Works Department. It is true that there is no distinction between the present Provincial Service recruited in India and the Imperial Service recruited in England except in the matter of pay. But there should be no insuperable barrier in the way of the Indian or the European settled in India who may try to secure the same pay and emoluments as the European recruited in England, provided that he proves his fitness in every respect.

The proportion of Europeans and non-Europeans admitted during a period of 18 months, into the Public Works Department, from 1st January 1911 to 30th June 1912, is exhibited in the following table, vide Government of India Classified List (excluding Bombay, Madras and the Railways):—

	Royal Engineers.	Imperial Engineers.		Provincial Engineers.
		Appointed in India from Covenanted Temporary Establishment.	Appointed in England.	
Europeans ...	3	10	13	6
Non-Europeans	—	—	1	8

Out of a total of 27 Royal and Imperial Engineers appointed during a period of 18 months only one is an Indian, while among the Provincial Engineers the Indians represent only 57 per cent. On the whole, therefore, the position of the Indian Engineers is not such as to satisfy their legitimate aspirations. Europeans and non-Europeans should be freely admitted into the Imperial Service.

The Indian Engineering College of Rurki which is the oldest institution of the kind in India was founded in 1848. Not till about *sixty years afterwards* was an Indian officer recruited from that College given a trial in the administrative grades. Even now the number of Indians in these higher ranks is very few. Greater and more liberal opportunities should be given for entering the higher spheres, and steady and sympathetic effort must be made towards testing efficiency in the actual administration of the Department instead of showing any tendency, real or apparent, to assume unfitness without a fair and unrestricted trial. The soul of grievance lies in the fact that the non-European is not allowed an equal chance with the European, and not in the mere preponderance of the European element in the Department.

72,554. (VIII.) Relations of the service with the Indian Civil Service and other services.—All Superior Indian Services should, as far as possible, be modelled on uniform lines as regards modes of recruitment, and conditions of service, salary, leave and pension. A good deal of jealousy and discontent has arisen in the past on account of undue differentiation in this respect. It is recognised that the Indian Civil Service, which is the premier service of India and which supplies Government with officers of the highest ability and attainments for the general administration of the country, should receive exceptional treatment. With this reservation, all services should be constructed and maintained alike.

In all attempts at reorganization either in the Public Works or in any other Department, the process has invariably been one of levelling up and never of levelling down. Officers of one Department naturally aspire to the higher salaries and allowances paid in other Departments and even the dignity visible in other cognate services leads to discontent among the members of the less favoured Department. Witness the case of the "Upper Subordinate" of this Department who is not really drawing very much less pay than officers performing similar functions in the other Departments; yet he is discontented because he always remains a "Subordinate" even though he may be drawing Rs. 500 a month, whereas one drawing even Rs. 200 per month in the Provincial Civil Service and not holding any higher charge is classed as an "Officer"—an Extra-Assistant Commissioner. What the Public Works "Upper Subordinate" wants is not higher pay and emoluments so much as greater dignity and importance in the eyes of the public.

A state of affairs such as this is not calculated to promote either economy from the point of view of Government or contentment and harmony from the standpoint of the services. A serious attempt must therefore be made to equalize the conditions of service in all Departments as far as may be practicable so as to extinguish all feelings of jealousy and to silence discontent.

72,555. (IX.) Other points.—(i) *Participation in the new Rules.*—The present generation ought to participate in any improved rules regarding admission into service, pay, pension, etc., that may be recommended by the Royal Commission and it is hoped that an early decision will be reached on those recommendations. As regards pension particularly, it is only fair that officers who have been urging so long for better pension and who have been told to await the result of the deliberations of the Royal Commission should have the benefit of the new rules with retrospective effect even though they may retire by the time these rules are brought into force.

(ii) *Expenses of an Indian Officer.*—It is erroneous to suppose that the expenses of an Indian officer are, generally speaking, less than those of a European officer. The European society and the Indian society are differently organised and the accumulation of centuries has no doubt created dissimilarity of tastes and ideals; yet the channels of expenditure, under the new conditions of life, are as many and as varied in the case of the Indian officer as in the case of the European, even though they may not all flow in the same directions.

The Indian members of the superior services are rapidly adopting the European mode of living. An Indian officer has, indeed, all through his service to keep up a double establishment; for although he and his wife may mix with the European freely, they cannot possibly forsake those of their Indian friends and relations who have not advanced so far.

Unlike the European, an Indian officer has to support his family, not infrequently a large one, from the date he joins the first appointment. The recent rise in prices in India which it is believed is proportionately higher than in England, affects an Indian perhaps more severely than a European in the first years of his service.

Unlike his European confrères, an Indian has to support, besides his own family consisting of parents, wife and children, a large number of collaterals (brothers, widowed sisters, daughters, etc.). These dependants go on increasing as the officer advances in age. It seems unnecessary to enter into the ethics of the question here. Facts must be taken as they are, and it cannot be denied that the Indian officers have, as a rule, to spend on this head of expenditure far more than they are known to spend on their own personal comforts and social obligations and amenities.

Parents in India have begun to realize the importance of giving their children the benefits of English education and travelling abroad. The expenses incurred by Indian officers of the superior services in connection with the up-bringing of their children are thus growing daily and approaching those borne by European officers.

(iii) *Relations between European and Indian Officers.*—Taking the Department as a whole the relations between European and Indian officers are happily not wanting in cordiality. Any detailed inquiry into this subject must be deprecated. At the same time it seems necessary in the interests of good government that the matter may be frankly and firmly yet gently dealt with. To leave his point out of consideration would be to leave the essence of the whole problem before the Royal Commission untouched.

Endeavour must be made to establish, if possible, a more harmonious and sympathetic connection between the two classes of public servants. Time, education and co-operation are slowly but steadily pulling down the barriers and the day is perhaps not far distant when the members of the European and Indian communities whom Providence has in His wise dispensation brought together for the fulfilment of His divine ends will mingle freely in all paths of life, both social and official.

The time has indeed come when Government might consider seriously whether European and Indian officers should not be encouraged in every possible

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manner to come more intimately into contact with each other so as to understand each other better, and cultivate closer, healthier and more friendly relationship with each other. Where free social intercourse is not practicable, mutual visits and exchange of ideas on matters of common interest might be systematically fostered. Indifference or lukewarmth in this respect must be viewed with disfavour and any gross act or behaviour leading to a serious breach of cordiality on the part of either the Indian or the European should be regarded as a stumbling block to promotion.

Imagine a young Indian officer full of devotion to the Throne and of zeal for his country joining a district far away from his home and his early associations. He calls on all the European officers, he is received with varying degrees of coldness, and no one returns his call. Other European officers join the

district, they call on their European colleagues, but not on him. He meets them as strangers, receives no sympathy and is not treated as their equal. The same story repeats itself in other districts. The young mind is unhealed and embittered and the bitterness clings to him all his life. The unhappy and uncongenial surroundings engender discontent and crush all initiative out of him.

The picture, though imaginary and depicting cases of more or less exceptional occurrence, is not overdrawn. A woeful picture such as this—even a solitary one—should not, if possible, be allowed to hang on the walls surrounding the official life of the Indian youth whose mind is stored with sentiments of profound gratitude and ardent loyalty to the British Throne and whose heart has been stirred to its innermost depths by the gracious message of Hope and Sympathy from his Beloved Sovereign.

Mr. J. H. SHARPE, called and examined.

72,556. (Chairman.) The witness was an Executive Engineer at the Central Provinces and represented the Provincial service. He was recruited from Thomason College, Rurki, and was now in his thirteenth year of service.

72,557. His colleagues proposed the abolition of the division into Imperial and Provincial branches and suggested the constitution of a new Imperial service recruited by competition in India and in England, two-thirds being recruited in India and one-third in England. He had statistics to show that if that method was adopted, even after twenty years the proportion of Indians to Europeans would be as one to two. Indian training was quite as good as the training to be obtained in England, but he did not think it was superior. He looked at the matter purely from an engineering point of view and not from the point of view of candidates prior to their entering an engineering college, but probably the earlier education would also have to be taken into consideration. He believed a competitive examination in England would lead to more students coming forward and a better class of students than was obtained at present. The subjects necessary for a competent engineer could very well be tested by a competitive examination. At present many students did not go in for the Public Works Department because they thought they had no chance of being nominated owing to want of influence, though he did not wish to say that any favouritism was shown by the selection board. There should be no form of selection.

72,558. Under the proposed scheme there would be no promotion from the lower branch to the higher. A subordinate after a certain number of years' service would probably make an efficient officer for executive work but not for administrative posts. At present they came in so late that they could not rise to higher than executive positions. The Provincial recruitment should take place after the results of the examination for the Imperial service were made known, so that those who did not succeed in entering the Imperial service would be able to go into the Provincial service. He did not think they would object, as they would have found out they were not as good as the men who had succeeded in getting into the higher service.

72,559. He suggested a two years' training in England for Indians so as to broaden their views. There would be no difficulty in finding works in England where officers could spend their leave if the Secretary of State paid a premium.

72,560. He did not recognize the principle that an officer recruited from Europe should have compensation in the form of foreign allowance when serving out of his own country, and he himself would be prepared to serve in a foreign country provided his pay was the same as the engineers of that country were receiving. Probably the pay in India would not be sufficient for a man in Africa if the man in Africa were getting higher pay.

72,561. He had no details with regard to allowances on transfers. At present officers received double first-class fare, which did not meet one-tenth of the cost.

72,562. (Lord Ronaldshay.) The written statement was agreed to by six members out of fourteen in the

Provincial service. A copy was sent to every member but eight did not reply. It was not correct to say, as was said in the written statement, that it was the unanimous opinion of the service, and that paragraph should be deleted. He believed, however, that the other eight officers would agree generally with what was said.

72,563. (Sir Theodore Morison.) The number of men required every year was about forty, which would mean that the recruitment in India would be about twenty-seven under the proposed scheme, and he thought that number could be found, not from Rurki alone but from the other engineering colleges as well. At present the competition to enter service was very keen and there were far more candidates than vacancies.

72,564. The real complaint of the officers was in the smallness of the pay of the Provincial Engineers. An engineer was paid much better by private firms than by the Government. There was no real market rate for an Indian engineer in India. The first man in the list did not always enter the Provincial service. The competition to enter the service was probably due to the hope that after they had entered they would get something better than the present Provincial salary.

72,565. (Mr. Chaulal.) He had received no expressions of dissent from any member of the Provincial service to the opinions expressed in the written statement, and he did not think there were any proposals in the statement which prejudicially affected the interest of the officers.

72,566. The fact that there were many applicants for posts in the Provincial service was not a real test of market value. Probably if the present salaries were halved there would be applications just as there were now.

72,567. If a foreign allowance was given to imported engineers it was only logical and in the interest of the State that a larger number of Indian engineers should be employed.

72,568. (Mr. Sly.) The written statement was circulated to all the members of the Provincial service including promoted subordinates, but no replies were received from the latter. He did not think promoted subordinates would agree to the proposition that there should be no promotion from the subordinate service.

72,569. He passed out from Rurki in 1901, but as he had no knowledge of the present recruits from that college he was unable to make any comparison of them with the recruits of the past. The reason why the number of Europeans entering Rurki was now smaller than formerly was that the college had been closed for recruitment to the Imperial service. If it were opened again for that service a large number of Europeans would enter. Recruitment from Rurki was made on the basis of a continuous record of marks throughout the whole college career, but he thought an open competitive examination would be a much better system.

72,570. The officers in the lower branch of the proposed new service would hold charge of sub-divisions. The sub-engineering grade would be converted into extra assistant engineers. The new service would

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consist of the existing cadre of sub-engineers and some men appointed from the colleges. He did not think there was any objection to the use of the term assistant engineers.

72,571. (Mr. Fisher.) He had one Anglo-Indian sub-divisional officer under him who had been trained at the Crystal Palace, but the majority of Provincial engineers were trained at Rurki.

72,572. He thought it would be a wise plan to put English recruits under superior Indian trained officers because they would more quickly understand how to deal with Indian subordinates. An Indian trained officer naturally understood native subordinates better than an officer recruited from England.

72,573. (Mr. Mudge.) The fact that the written statement had been agreed to by Imperial, Provincial, and temporary engineers gave it greater weight than if it came only from one section.

72,574. The Indian Civil Service, in virtue of the peculiar position it held in the country as the premier service, required certain qualifications in connection with its earlier education which were not needed in purely professional services.

72,575. He proposed to exclude Provincial men from promotion to the higher branch, believing that it would tend to lower the status of the Imperial service, and the men would have already had an opportunity of getting in by sitting for the competitive examination.

72,576. If Government thought that a temporary engineer, after about ten years' service, was qualified for a permanent billet, he could be appointed for the Provincial service.

72,577. (Mr. Abdur Rahim.) If the engineering training in India was adequate then recruitment ought to be from India rather than from England; and even if the training in England was superior to

that in India he should still take up the same attitude, because an Indian trained engineer would understand his subordinates better than a man from England. It was also necessary for the development of the country that Indian training should be encouraged. If the principle was adopted that because education in England for various departments was superior to that in India and that therefore recruitment must be more largely from England than from India, it would result in recruitment in India never being larger than it was at present.

72,578. It might be necessary for certain reasons to have a preponderating element of Englishmen in the administrative ranks, but it did not follow that it was necessary in the executive ranks. He did not agree, however, that there should be a large element of Europeans in the administrative grades and Indians should have a chance of being promoted if found fit for administrative rank.

72,579. If the bulk of recruitment was from India Indian engineers should be paid according to their market value, and any Englishmen employed should be paid according to the market value of an engineer in England.

72,580. (Mr. Clark.) He did not think that if the principle of a foreign allowance was applied generally to all services in India it would be more acceptable to Indian recruited men than the present arrangement.

72,581. (Mr. Vachla.) An Indian-recruited officer in the Imperial service should be paid the same as an English-recruited man because he had to keep up the same style of living. Also if the pay was the same a better class of officer would be obtained.

72,582. He did not think the preliminary education of an English school was of much value for service in India and he did not consider English-trained engineers were superior to Indian-trained engineers.

(The witness withdrew.)

C. S. C. HARRISON, Esq., Executive Engineer, Pravara Canals District, Bombay.

Written Statement relating to the Public Works Department.

72,583. (I.) **Methods of recruitment.**—(i) *Establishment of a special Training College.*—The Imperial Engineers as a body consider that a residential College on the lines of the late Royal Indian Engineering College, Coopers Hill, should be established in England from which Imperial Engineers for the Public Works and Railway Departments should be recruited.

There is practically unanimous opinion that the training which such a College would afford would foster an "esprit de corps" which cannot possibly be obtained under the existing methods of recruitment. Such a spirit and the qualities it engenders are of the utmost value to the individual, to the Department, and to Government.

(ii) *Constitution of the Selection Committee in England.*—Should it not be deemed possible to establish a residential College there appears no alternative but to adhere to the selections of qualified Engineers from the open market.

Should this course be followed the Imperial Engineers strongly urge that at least 50 per cent. of the members forming the Selection Committee should be Senior Officers of the Public Works and Railway Departments either on the active or retired lists, as it is felt that the intimate knowledge of these Departments and their requirements possessed by such officers would be of much value in assisting the Committee in their selection of the right class of man.

It is considered essential that the possession of the qualities of a gentleman be given particular prominence at the time of selection.

72,584. (II.) **System of training and probation.**—(i) *Training.*—It is suggested that it should be made a condition of appointment that recruits should have had at least one year's practical experience on Engineering Works in the British Isles, in addition to an adequate theoretical training.

This latter training is assured by the present academic requirements as at present laid down by the existing rules of selection, but the question of practical experience requires greater attention.

It is considered that the practical course should be such that the selected candidate will have had the opportunity to study, practically, the difficulties encountered on such works as the construction of dock and harbour works, water-supply to towns, large sanitary schemes, erection of masonry and steel bridges, and railway construction works.

Special mention is made of these classes of works because many candidates put in their practical course with firms who specialize highly. In such cases little valuable general experience can be obtained, whereas such general experience is essential to the Indian Engineer who, by the nature of service in India, has to deal with all classes of work.

(ii) *Probation.*—It is considered that if the Selection Committee at Home pay particular attention to the academical qualifications combined with the nature of practical experience undergone by the candidate, a period of probation in India is not necessary.

It is considered that the question of social qualifications should be treated as very important.

High academical distinction is not the sole desideratum for service in India. It is an unquestionable fact that the Native of India will give greater respect to a real gentleman or, as he generally puts it, a "pacca Sahib," than to an officer wholly or practically devoid of those traits that go to make the "English Gentleman."

72,585. (III.) **Conditions of service.**—(i) *Revision of the Permanent Cadre.*—It is urged that the cadre of the Permanent Engineers should be more frequently revised than has been the case in the past. It is advisable that the number of Permanent Engineers should more closely accord with the number of permanent appointments and that less reliance be placed upon making up deficiencies by the employment of Temporary Engineers. In support of this suggestion attention is invited to paragraph 306 of the Report of the Irrigation Commission of 1901, which, though recorded in connection with the Irrigation Branch, applies equally to all branches of the Service.

(ii) *Appointment of Royal Engineers to the Department.*—The conditions under which Royal Engineers

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are drafted into the Public Works Department have in the past, and are liable to again in the future, affect adversely the position and prospects of Civil Engineers.

Royal Engineers brought in are usually credited with extra departmental service to such an extent as to give them departmental seniority over Civil Engineers who are senior to them in age and of many years standing in the Departments.

The effect on a Civil Engineer thus superseded is utterly disheartening; if senior, his promotion to administrative rank is retarded, or he may even be prevented from ever reaching administrative rank, and, if junior, it may result in delaying him from being placed in a Divisional charge.

Whatever form it may take the frequent result is to subject him, at one time or another, to a heavy pecuniary penalty.

It is recognised that it is necessary in the interests of Government, that employment should be found for Royal Engineers in the Departments, but it is strongly urged that in justice the appointments should be made in such a manner as not to impair the prospects of Civil Engineers of the same age already serving in the Departments.

(iii) *Transfer of Temporary Engineers to the permanent scale.*—It is likewise urged that if Government transfer any Temporary Engineer now serving in the Departments to the permanent establishment the same guiding principles should be observed to safeguard the prospects of officers already on that establishment, as in the case of Royal Engineers.

(iv) *Future appointments of Temporary Engineers.* should only be made on the specific understanding that the holders of the same will not, under any circumstances, be brought on to the permanent scale. It remains with Government, if it is considered expedient, to improve the Temporary Service as such. Thus the improved provident fund for temporary employés in State Railways might be extended to all Temporary Engineers in the Public Works Department and that, should circumstances so occur that their services will be required for some considerable period, they be allowed to take combined leave up to a period of six months.

(v) *Compulsory retirements.*—Article 649 of the Civil Service Regulations which provides for the compulsory retirement of Civil Engineers who, on attaining the age of 50 years, have not been promoted to the rank of Superintending Engineer should, it is considered, be more rigidly enforced in the case of officers who, on reaching that age, are reported as not qualified for promotion to the rank of Superintending Engineer.

It is also recommended that an officer who is reported on as inefficient during three successive years be compulsorily retired, irrespective of length of service. It is considered that in such a case a suitable bonus, less than what an efficient man might expect to get (but would not get because it would not be offered to efficient) should be given. The actual bonus to be given would require mature consideration but it is suggested that it should take some form of a percentage contribution by Government to the sum contributed to the Provident Fund by the officer.

This suggested bonus would of course only apply to cases where pensions had not, under existing rules, become due. In the case of an officer being compulsorily retired after he has earned a pension Government would consider what proportion of the pension should be given.

(vi) *Observation of the principle laid down in P. W. D. Code, Vol. I, paragraph 80.*—It is recommended that the principle laid down in paragraph 80, Volume I of the Public Works Department Code, namely, that promotion to the Administrative Ranks should be by a system of selection as opposed to that of seniority, be more closely followed than at present.

72,586. (IV.) **Conditions of salary.**—*Present scale of pay.*—In 1908 the scale of pay of the Public Works Department was reorganised and placed on an incremental basis, but at the same time the exchange compensation formerly given to officers was withdrawn. While gratefully acknowledging the small net increase that has accrued from the recent reorganization it is very strongly urged that the Imperial Engineer is still very inadequately paid.

The net increase in emoluments under the new scheme is not commensurate with the increased cost of living in India which has been so marked a feature of the last decade, and greatly increased responsibilities.

In paragraphs to follow, proposals are advanced for the improvement of furlough and pension allowances, which will serve to alleviate some of the hardships which are most severely felt, and in the belief that these proposals cannot fail to receive favourable consideration, no specific suggestions regarding the improvement of the scale of pay generally, are now put forward. If after careful consideration of the question in regard to other Departments or services, the Royal Commission consider that the increased cost of living deserves an increase in the salary as at present drawn, the Imperial Engineers urge that they should participate in any such general improvements as the Commission desire to recommend.

It is also suggested that there should be more liberal treatment of the cases of officers who are subject to individual hardships through the exigencies of the service.

A case in point is the granting of a special allowance to officers who have to serve in isolated places. They are cut off from many of the amenities of life which are enjoyed by others more favourably posted.

This particular hardship generally falls on the more efficient officers for, on account of their efficiency, they are selected for special work which, especially in the case of irrigation schemes, entails their sojourn in lonely places.

The following cases of individual hardship which may arise owing to irregularity of recruitment are brought to notice, and suggestions put forward for their mitigation:—

(i) Under the reorganization scheme of 1908 it is ruled that an officer may not draw more pay than Rs. 800 per month unless he is in charge of a division, or in a charge which, in the opinion of the Local Government, is of equal importance. This is unjust to an officer who, though fully qualified, does not obtain a divisional charge simply because there is no vacancy for him.

It is strongly urged that the rule should be amended to the effect that an officer of the Imperial service reported fit to hold a divisional charge, should continue to receive the ordinary increments laid down in the scale, irrespective of his being in actual divisional charge.

(ii) Under the reorganization scheme Executive Engineers attain their maximum pay of Rs. 1,250 per mensem after 19 years' service. It is urged that if, on account of there being no vacancy, an Executive Engineer, though otherwise qualified, is not promoted to Superintending Engineer's rank on completion of 22 years' service he should receive a personal allowance of Rs. 150 per mensem, until such time as he is promoted to administrative rank.

The existing pay of Chief and Superintending Engineers is deemed wholly inadequate. It is felt that the work and responsibilities of these officers has increased greatly of recent years and out of all proportion to the increase granted in their pay.

The pay of a first class Chief Engineer is less than that of a Commissioner of a division and, whereas the area over which the latter exercises control constitutes only a small portion of a Province, the responsibility of the former extends over a whole Province. The number of Chief Engineer'ships throughout the whole of India is small and, with the exception of the post of Secretary to the Government of India in the Public Works Department and that of Inspector-General of Irrigation, they are the only highly paid posts to which an officer of the Public Works Department can hope to attain. On the other hand there are a number of Commissionerships in each Province in addition to many other high offices, both with Local Governments and with the Government of India which fall to the lot of officers of the Indian Civil Service.

As regards Superintending Engineers, it may be pointed out that the highest class in that rank draws less than does a Senior Collector.

The above arguments apply equally to the Superintending Engineer ranks and it is strongly urged that an increase of pay in all classes of the Superintending Engineer grade is absolutely necessary.

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The proposals put forward are :—

Chief Engineers:

Only one class ... Pay Rs. 3,000 per mensem.
Allowances ... " 500 do.

additional for the post of Secretary to Government and Rs. 250 per mensem for the post of Joint Secretary to Government.

Superintending Engineers:—

Class I ... Pay Rs. 2,500 per mensem.
Class II ... " 2,000 do.
Class III ... " 1,750 do.

Secretary to Government of India in the Public Works Department.—For similar reasons as in the foregoing, it is considered that the duties and responsibilities attaching to the post of Secretary to the Government of India in the Public Works Department, which appointment is invariably held by an officer specially selected from among Chief Engineers, and usually of much longer service than any other Secretary to the Government of India, warrant the appointment being paid at the same rate as Secretaries in the Home, Finance, and Commerce and Industry Departments, viz., Rs. 4,000 per mensem.

72,587. (V.) *Conditions of leave.—Furlough.*—The amount of furlough, which Imperial Officers of the Public Works Department appointed in England can earn is generally considered sufficient. The rules governing the grant of furlough are practically identical with those which apply to the Indian Civil Service and Military Officers subject to Civil leave rules, except in the most important particular of leave allowances. In the case of officers of the Indian Civil Service and Military Officers under Civil leave rules, furlough allowances are subject, if paid at the Home Treasury, to a minimum limit of £500 per annum, or the salary last drawn whichever is less, and to a maximum limit of £1,000 per annum; whereas for Civil Engineer Officers of the Public Works Department there is no minimum limit and the maximum has been fixed at £800 per annum. The present furlough allowances permissible to Imperial Civil Engineers are as follows:—

Years of completed service.	Maximum furlough pay.	Years of completed service.	Maximum furlough pay.
8	£ 279	19	£ 517½
9	297	20	540
10	316½	21	555
11	337½	22	562½
12	360	3 years as Superintending Engineer, 3rd Grade.	675
13	382½		
14	405	3 years as Superintending Engineer, 2nd Grade.	787½
15	427½		
16	450	Thereafter	800
17	472½		
18	495		

As long ago as 1870, in Despatch No. 43-P. W., dated 28th March, the Government of India said:—"Section 16.—With reference to paragraph 4 of Your Grace's Despatch under reply, we may remark that we have already recommended the equalization of the pay of the Military Branches of the Department, and we are gratified to find this proof that Her Majesty's Government are likely to receive that proposal favourably. On this point we only add that we shall be glad to see some plan adopted by which the furlough allowances of Civil Engineers shall be equalized with those of Military Officers in the Public Works Department and, so far as practicable, the advantages of pension also." This hope has been reiterated many times by the Government of India and by different Secretaries of State since the date of that despatch. It is, however, a hope that remains unrealized up to the present day, since a Royal Engineer in the Public Works Department, with 8 years' service to his credit, is entitled to almost double the furlough allowances of a Civil Engineer officer doing exactly the same class of work and having the same service in the Department. A Civil Engineer is obliged to complete 18 years' service before he can claim an allowance approaching that which a Royal Engineer is entitled to after 8 years' service.

The present allowances are so inadequate that a large majority of officers cannot avail themselves of

the furlough due to them, even though the state of their health urgently demands that they should do so. That such is the case is assuredly not in the best interests of the general Administration. The question of leave allowances is raised in the last paragraph of the memorials recently submitted by officers of this Department; copies of which are attached to this Memorandum as Appendices 2 and 3. The reply given to the memorialists by the Government of India was that:—"Pensions and leave are subjects of reference to the Public Services Commission, and as no doubt the Commission will enquire into these matters and submit recommendations, the Government of India consider that no useful purpose will be served by considering the prayers of the memorialists at this stage."

Under the circumstances it is confidently hoped that the Royal Commission will be able to recommend that the leave allowances sanctioned for officers of the Indian Civil Service, and Military Officers subject to Civil leave rules, may be made applicable to Civil Engineer Officers of the Public Works and Railway Departments on the Imperial lists. There is no valid reason why they should receive less favourable treatment than the other officers named. It is pointed out that feeling on this question is very strong, and that communications received from officers of the Department show that there is great discontent throughout the Department regarding the inadequacy of leave allowances.

It is urged that where the allowances are drawn in India they should be paid in the equivalent in rupees at fifteen rupees to the pound sterling.

(ii) Furlough earned by an officer should be granted at any time after the completion of eight years' service, subject to the exigencies of the service, unless the applicant has returned within eighteen months from privilege leave covering a period of three months.

Special leave.—The existing rules regarding the grant of special leave require no alterations, but the allowances should be the same as in the case of furlough.

Privilege leave.—(i) Under the present rules an officer can earn privilege leave to the extent of one calendar month for every eleven complete calendar months of duty, and such leave is cumulative up to a period of three months only. In the case of officers who have accumulated the full period it frequently happens that the exigencies of the public service prevent their being granted privilege leave when they desire it, and this leads to the leave lapsing through no fault of their own. It would in a measure mitigate against this loss of leave on full pay which an officer has fairly earned, if the cumulative period were extended from three to six months.

(ii) An officer should be allowed to avail himself of all privilege leave due to him immediately prior to retirement, and be permitted to retire from the service at the end of his leave, without having to return to duty as he is now obliged to do. This concession has already been made where privilege leave is combined with other leave, and its extension to privilege leave alone, besides removing a legitimate grievance among officers of the Department, would lead to much less administrative inconvenience than is now the case.

Study leave.—Modern Civil Engineering is a highly specialized profession and progress in the methods of construction is very rapid. In view of the vast undertakings of the Government of India in the Public Works and Railway Departments, it is essential, for efficiency and economy, that the Engineering Staffs of these Departments should keep themselves abreast of modern engineering practice. Engineers can only accomplish this by visiting and studying works of special interest in progress in different parts of the world. That the importance of this is recognized by other nationalities is instanced by the number of Engineers who are commissioned by their respective Governments or private employers, to visit works in India, in order to study Indian methods. The majority of Civil Engineers serving in these

* Government of India's letter P. W. D., No. 1399-1408-E. dated July 23rd, 1913—not reprinted.

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Departments who wish to visit works in the British Isles and other countries, have to do so as private individuals, and entirely at their own expense unless they are placed on deputation, or are specially permitted to visit certain works while on leave, permission in this case usually being given only when Government require special information regarding a particular aspect of a project. In the latter case certain travelling and other expenses are allowed, but the time spent in the visits counts against the officer's period of leave. It is recommended that officers of the Public Works Department should be encouraged to visit works outside India, and that they should be provided with every facility for doing so. It is urged that either new rules should be introduced to admit of these facilities being granted, or that there should be a much more liberal interpretation of the existing rules regarding the placing of an officer on deputation.

The following instance of study leave obtaining in another professional service is cited. In the Indian Medical Service study leave is granted in England up to one year out of total service in addition to furlough, for the purpose of allowing an officer to study any particular aspect of his profession which he may desire. During this period he receives furlough pay and lodging allowance amounting to four to eight shillings per day.

72,588. (VI.) *Conditions of pensions.—Retiring pension.*—The greatest grievance of Civil Engineer Officers of the Public Works Department and one which is most sorely felt is the totally inadequate retiring pension to which they become entitled under the existing rules. Many efforts have been made, spread over a period of forty years or more, to obtain amelioration in this respect. Both the Government of India and different Secretaries of State have long recognized that all was not well, and new rules and conditions have been introduced to improve matters, but the net result has been that the present pensions are actually less than they were 40 years ago, when the qualifications demanded from men joining the service were not as high as they are now and when the cost of living was considerably less. Numerous memorials on this subject have been submitted to the Government of India and H.M. Secretary of State during the last six years by officers of these Departments. The first memorials were submitted in 1907, but the petitioners were favoured with no reply up to August, 1912, when they were informed by the Government of India in their letter No. 942-E., dated 30th August, 1912, that no decision could be arrived at pending the receipt of the report of the Royal Commission on the Public Services in India. It is to the Royal Commission therefore that the Civil Engineer Officers now look for redress of this long standing grievance, and it is strongly and respectfully urged that the scale of pensions prayed for in the memorials of 1912-13, Annexures II and III, is the least which can in equity be recommended.

Further, that as this grievance was brought prominently to the notice of the Government of India, in the memorials of 1907-08 to which they vouchsafed no reply, and as in the meantime a number of officers affected have been placed on the retired list, and many more will probably be called upon to retire before a decision is arrived at, any improvements made in the scale of pensions should have retrospective effect, at least from the year 1908.

Scale of invalid pensions.—Prior to 1884, invalid pensions granted to Civil Engineer Officers of the Public Works Department on the Imperial list were governed by Article 474 of the Civil Service Regulations; this article also governed the pensions of all officers belonging to the Uncovenanted Services, as then termed. In Lord Kimberley's Despatch of 1883 a new scale was introduced for Imperial Engineers and Telegraph Officers, with a view to ameliorating their conditions of service; this scale is covered by Article 641 of the Civil Service Regulations. Under this Article the scale has been increased from ten-sixtieths of average salary for ten years' completed service, eleven-sixtieths for eleven years, and so on to twenty-sixtieths for ten years, twenty-one-sixtieths for eleven years and so on, but at the same time the maxima limits have been reduced from those allowed by Article 474. How this rule, brought in with the

object of improving conditions in certain Services, adversely affects officers at the present time, and how much better off an invalided engineer would have been under Civil Service Regulations, Article 474, is clearly shown from a comparison of the columns in the table below:—

Years of completed service.	Civil Service Regulations, Article 641.			Civil Service Regulations, Article 474.		
	Amount calculated on a percentage basis.	Fixed maximum.		Amount calculated on a percentage basis.	Fixed maximum.	
1	2	3	4	5	6	7
		Rs.	Rs.		Rs.	Rs.
10 ...	20 60	2 813	1,000	10 60	1,406	2,000
11 ...	21 60	3,150	1,400	11 60	1,650	2,200
12 ...	22 60	3,520	1,800	12 60	1,920	2,400
13 ...	23 60	3,910	2,200	13 60	2,210	2,600
14 ...	24 60	4,320	2,600	14 60	2,520	2,800
15 ...	25 60	4,750	3,000	15 60	2,850	3,000
16 ...	26 60	5,200	3,000	16 60	3,200	3,200
17 ...	27 60	5,670	3,000	17 70	3,570	3,400
18 ...	28 60	6,160	3,000	18 60	3,960	3,600
19 ...	29 60	6,670	3,000	19 60	4,370	3,800
20 ...	30 60	7,200	4,000	20 60	4,800	4,000

It is a decided anomaly that officers of other services coming under Civil Service Regulations, Article 474, and drawing the same pay as an Engineer, should, if invalided, be entitled to a higher pension after 10, 11, 12, 13, 16, 17, 18 and 19 years' completed service, and to a less pension after 14 or 15 years' service.

It is urged, therefore, that to remove the anomalies pointed out, and to make Article 641 of real benefit to Civil Engineer Officers now serving in the Department, that the maxima limits should be at least the same as those fixed according to Article 474.

Family Pension Fund.—Unlike the Indian Civil Service and the Military Services in India there is no official Family Pension Fund for the Public Works Department. The emoluments of officers in this Department are not sufficient to admit of their making adequate provision for their families should they die in harness. The knowledge that they are unable to make such provision is a constant source of anxiety to many officers who are entirely dependent on their salary, and whose duties constantly take them into situations which are prejudicial to health. They have also the additional anxiety of knowing that their pensions are purely personal and cease with their death. There is a strong desire therefore, that means may be found whereby an officer may be aided in making suitable provision against the event of his death for the member of his family dependent upon him. Pension has been officially defined as deferred remuneration, which means that a certain portion of the salary which would have been paid to an officer, had there been no pension attached to his

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appointment, is kept back to provide for a pension on retirement. This view is corroborated by the fact that when an officer is transferred on Foreign Service he is made to contribute towards the cost of his pension at the rate of one-sixth of the pay he would have received had he remained in the service of the Government of India. It may be presumed, therefore, that an officer only receives six-sevenths of the pay he would have received had there been no pension to provide for, and that one-seventh is kept back by Government as the officer's contribution towards his pension fund. If the officer had the option of investing the amount assumed to be retained by Government to provide for an annuity with a private Insurance Company, he could probably so arrange the terms, that a portion of his annuity would be assured to his widow or other member of his family dependent upon him, should his death take place within a certain number of years from the date his annuity fell due, with the additional security that his family would be covered against the risk of his death, should it take place during the time he was subscribing to his annuity, in the guarantee of a considerable sum of money. Could some such scheme be worked out by Government on an actuarial basis a large number of officers, not only in the Public Works Department but in other services similarly unprotected, would be glad to avail themselves of it and to subscribe towards the extra cost.

One set of leave and pension rules for all Imperial Engineers.—There is a strong wish among Imperial Engineers, that there should be one set of leave and pension rules, for all Civil Engineer officers on the Imperial List, irrespective of the source from which they were recruited. Such differentiations as still exist should, it is urged, be abolished.

72,589. (VII.) Such limitations as may exist in the employment of non-Europeans and the working of the existing system of division of services into Imperial and Provincial.—Appointment of non-Europeans to the Imperial Service.—As regards employment of Indians in the Imperial branch of the Public Works Department, it is considered that the European element must, for a good many years to come, largely preponderate to admit of the present standard of efficiency being maintained. The number of appointments to the Imperial Service which may at the present time be reserved for Indians is ten per cent., and this rule should not, it is considered, be exceeded at present. The proportion of Natives of India to Europeans and Anglo-Indians combined at present on the active list of Imperial Engineers of this Presidency is 18½ per cent.

Of the 10 administrative posts in the Department three or 33½ per cent. are at present held (permanently or temporarily) by Indians.

Appointment of Natives or Anglo-Indians to the Imperial Service.—It is considered that no Native or Anglo-Indian should be appointed to the Imperial Service unless he has studied for at least three years in the British Isles and obtained a degree from one of the recognised British Universities.

Divisions into Imperial and Provincial Services.—It is considered that the present system of having two branches of the service, viz., the Imperial and Provincial, should be adhered to for it is recognised that the value of a sojourn and training in the British Isles renders an Engineer's work more efficient than if he only obtains his education in India.

Recruitment for the Provincial Service.—It is also considered that the existing system of recruitment for the Provincial Service is satisfactory and that with the gradual improvements that are bound to take place in the Indian Engineering Colleges the general standard of efficiency of Provincial Engineers will be raised.

Differentiation in pay between the Imperial and Provincial Services.—It is considered that the market value of an Indian educated Engineer is considerably less than that of an Engineer with British qualifications. The Indian Engineer serves in the land of his birth and consequently is able to live in the accustomed style of his surroundings. That this is not possible for the European educated Engineer in India is obvious. Very few Indian Engineers would think of taking up an appointment in a foreign country without demanding a greatly increased salary. For this reason and for the reason that an Engineering educa-

tion in India is cheaper than that in England, it is considered that there should be a marked differentiation in the rates of pay between the Imperial and Provincial Services.

72,590. (VIII.) Relations of the service with the Indian Civil Service and other services.—It is considered that the relationship as existing between the Public Works and other Services in India is, on the whole, satisfactory and should remain unaltered.

72,591. (IX.) Any other points within the terms of reference to the Royal Commission not covered by the preceding heads.—*Inadequacy of present travelling allowance.*—It is desired to bring to the notice of the Commission the inadequacy of the existing Travelling Allowance Rules in general, and in the case of transfers in particular.

It is urged that the existing rule which fixes the 5 mile radial limit within which, if an officer travels he cannot get the daily allowance, should be altered so as to read:—"Daily allowance cannot be claimed unless an officer travels at least 10 miles, out and back, from his headquarters."

Travelling allowance on transfer.—It is realized that the inadequacy of the allowance under existing rules to an officer on transfer is common to other Departments and while admitting that transfers in the interests of the Public Service must inevitably involve some expense to the officers transferred and the practical impossibility of framing any rules suitable to all cases that will obviate it, it is very strongly urged that attention be paid to the very great hardships, especially in the case of long transfers, to which an officer is put owing to the inadequacy of the allowance permissible under existing rules.

It is believed that the question of revision of the existing rules to obviate distinct pecuniary (in many cases almost crushing) loss to an officer on transfer was under the consideration of the Government of India some 6 or 7 years ago and it is requested that the question be again considered with a view to the rules, which contain several anomalies, being made more liberal.

This question has, for many years, caused great heart-burnings and is one the remedy for which has received a great deal of careful attention by members of the Service and it is considered that if the following allowances be fixed a cause for considerable complaint will be removed:—

Maximum allowances on transfer.

(a) The allowance of double first class fare by railway as at present.

(b) The following for transport of kit:—

For Chief and Superintending Engineers:—

Three railway waggons or their equivalent by steamer, 2 horses, 1 motor car and 1 cycle.

For Executive Engineers:—

Two railway waggons or their equivalent by sea, 2 horses, 1 motor car and 1 cycle.

Assistant Engineers:—

One railway waggon or its equivalent by sea, 1 horse, 1 motor car, or motor cycle, and 1 cycle.

It is also urged that the above allowances (as regards kit) be made applicable to an officer who on return from long leave is transferred to another station. In this case the kit allowance would be from the station at which the officer last served prior to going on leave to the station to which he is posted on return from leave, and the usual rail allowance from port of debarkation (within his Province) to his new headquarters.

Presidency house rent and extra emoluments.—It is felt that there should be some special pecuniary consideration shown to officers posted to the Presidency towns. At present an Engineer officer of this Presidency if posted to Bombay receives no extra pay. He is given a special Presidency house rent allowance if he is a married man, but nothing if he is a bachelor.

In the case of a married man, the special allowance for house rent is Rs. 125 a month on the average, but this is subject to the extraordinary condition that his wife or family must be actually residing with him; that is to say that supposing a man has children at school in England and his wife goes Home for three months to see them or goes away for the sake of her health, then he does not get this house rent allowance and, from this it is natural to deduce that he is

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expected to break up his arrangements, leave his bungalow or flat, and live in a hotel or club, only to again incur the expense of getting a new house and furnishing it at great expense.

It will be realized that it means that, in a city like Bombay, where suitable accommodation for a married man at any but exorbitant rentals, is difficult to get, the unfortunate officer has most probably to pay a heavy rent for his flat during the absence of his wife and yet get no allowance.

This is, it is considered, a most unfair anomaly and it is strongly urged that the Presidency house rent allowance should be extended to all officers whether married or not.

Apart from this grievance the question of extra emoluments to the pay of an officer posted to a Presidency town requires consideration.

In this department officers are not highly paid and, when posted to Presidency towns, they, unless they have a private income, must run into debt if they are to live up to their official position. The ordinary every-day expenses in a Presidency town (Bombay for example) are very great and as junior Executive Engineers are often posted to Presidency towns it will be readily understood that the Rs. 800 salary is almost entirely swallowed up by the bare necessities of life.

To remedy this source of complaint it is suggested that a special allowance of from 25 per cent. to 50 per cent. of the ordinary salary, in addition to that salary, be allowed to all officers appointed to posts in Presidency towns, the lower the pay the higher the percentage increased.

General Provident Fund.—Under the rules of this Fund interest on the account of a deceased depositor ceases from the date of tender of payment to the person legally entitled to receive the balance at credit of the account. It frequently happens that from inexperience in matters of the kind, and other causes, it is not possible to draw the amount immediately on tender of payment being made. It is therefore suggested that it should be permissible for the balance at credit of an account to remain for a reasonable period

after tender of payment has been made and to continue to draw interest during that period.

Inadequate recognition of the Engineering Departments in the Honours Lists.—There has been for a very long time a growing dissatisfaction among Engineers in India with the Honours distribution, which has resulted in what is felt to be an implied public slur on the profession.

It is felt that the power to confer Honours on the Public Services was entrusted to the General Administration as a means of giving public recognition to individual merit impartially to all public servants deserving such recognition, and that given impartial exercise of this power, the Honours Lists would be, to some extent, an index of appreciation by the Administration of services rendered by any given branch of the service. Judged by this standard, a study of the Honours List indicates a marked lack of appreciation of services rendered by the Engineers of the Public Works and Railway Departments which is felt to be unjust. There is, so far as is known, no other country in the world, where a similar system of Public Service Honours obtains, in which the Engineering profession is held in such light esteem, as is evidenced in the Honours List in India, while, certainly in some of its aspects, the work of the Department in India stands out prominently as of a high order of merit, as has frequently been proved by the deputation of Indian Engineers to other countries as experts in their particular profession.

Although it is not definitely known to the officers of this Department what system is followed in framing the Honours Lists, it is generally believed that the results, which are the subject of dissatisfaction, are due to the fact that the recommendations are almost exclusively in the hands of the Civil Service, and that this has led to a gradually increasing tendency to restrict Honours unduly to that branch of the Service.

It is believed that if the matter is considered worthy of notice by the Commission, an expression of opinion by them would carry much weight and lead to rectification of what is a very substantial grievance. The figures given below speak for themselves.

Statement comparing Honours granted in the Indian Civil Service and those granted in Public Works Department to each Province. Abstracted from the Civil Lists, April 1913.

	Bengal.	Bombay.	Madras.	Assam.	Behar.	Burma.	Central Provinces.	N.W.F. Province.	Punjab.	United Provinces.	Totals.
Indian Civil Service:—											
C. I. E. ...	11	9	11	3	6	5	6	4	17	12	84
C. S. I. ...	5	7	7	3	8	5	3	—	9	10	61
Kt. ...	—	—	1	—	—	—	—	—	1	2	4
K. C. I. E. ...	—	1	1	1	—	1	—	—	4	1	10
K. C. S. I. ...	1	2	2	1	3	1	2	—	—	2	13
Total, Honours ...	17	19	22	7	17	16	12	4	31	27	172
Cadres ...	176	180	176	50	111	171	110	39	170	243	1,426
Per cent. ...	9.7	10.5	12.5	14.0	15.4	9.4	11.0	10.0	18.2	11.1	12.0
Public Works Department:—											
C. I. E. ...	1	—	1	—	—	1	2	1	2	3	11
C. S. I. ...	1	—	—	—	—	—	1	—	2	—	4
Total, Honours ...	2	—	1	—	—	1	3	1	4	3	15
Cadres ...	46	103	101	24	48	92	51	21	165	116	770
Per cent. ...	4.4	—	1.0	—	—	1.1	2.9	4.0	2.4	2.6	2.0

Statement comparing Honours granted to Officers serving in various departments in the Government of India Secretariats.

Departments	Home.	Education.	Legislative.	Foreign.	Revenue.	Commerce.	Finance.	Railways.	Total of all Departments.	Public Works Department.
Number of Officers ...	10	8	3	7	9	15	6	10	75	8
Number of Honours ...	4	6	3	9	5	5	5	9	45	1
Percentages ...	40	75	100	130	55	33	83	90	60	—

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[Continued.]

ANNEXURE No. 1.

Purport of Memorials submitted in 1907-08.
(Vide Appendix No. XIII.)

ANNEXURE No. II.

Memorial of 1912. (Vide Appendix No. XIII.)

ANNEXURE No. III.

Memorial of 1913. (Vide Appendix No. XIII.)

Mr. C. S. C. HARRISON called and examined.

72,592. (Chairman.) The witness was an Executive Engineer in the Public Works Department of Bombay and represented the Imperial officers. He had completed eleven and a half years' service.

72,593. The present system of recruitment to the Provincial service was satisfactory, and with gradual improvements in the engineering colleges in India the general standard of efficiency of the service would be raised, and if the standard was raised the proportion of recruitment in India could also be raised provided a sufficient number of Europeans were recruited to maintain British characteristics.

72,594. With regard to the rule for the recruitment of Indians in England, he considered that there should be no increase on the present ten per cent. The majority of the officers believed that nobody should be selected in England who had not had three years at a British Engineering College and taken a degree, but personally he did not hold that view. His own view was that six or seven years at least should be spent in England, so that a man might have had a public school education and the influence of English surroundings before his college course. A college course of three years was not sufficient to make an Indian very much better than a provincial engineer. The written statement expressed the opinion of all the eighty-one officers in the service except five and therefore might be taken to represent the opinion of close on eighty-five per cent. Three years in England would mean that no officer could enter the Imperial service who had been trained in an Indian college, and that was so at the time he was at Cooper's Hill, where there were two Indian students who had passed in India and then gone to England for another three years' course.

72,595. The present system of division into Imperial and Provincial branches should be adhered to because a training in a British college was extremely important. It was true that in the past the Indian colleges had turned out as capable officers as were now to be found in the service, but the conditions of service had changed tremendously and the work now demanded a great deal more of a man than it did in years gone by. The press of work was much greater. Officers had more responsibility now, especially in the administrative grades, than in the days when Rurki men were successful engineers. He did not think the improvement in the Indian colleges had kept pace with the added responsibilities of the officers. The difference might be observed by referring to the administrative reports of thirty or forty years ago.

72,596. It should be a condition of appointment to the Imperial branch that recruits should have had at least one year's practical experience on engineering works in the British Isles. Practically every Junior officer now in the service had had a year's training on some works in England. The consensus of opinion was that if it was considered that an officer had not had sufficient practical experience in England with his one year's practical course he might be put on a practical course in India as well. It was essential that a man should have a year's practical training and it was a very important factor in obtaining men for the public service.

72,597. There were four Royal Engineer officers in the department. The junior officers had come in at the bottom of the list, so that of recent years the difficulty of a Royal Engineer being placed over Civil Engineers of the same standing had not arisen. The

ANNEXURE No. IV.

GOVERNMENT OF INDIA.

Public Works Department, Irrigation Branch.
Letter No. 942-E., dated Simla, the 30th August,
1912. (Vide Appendix No. XIII.)

ANNEXURE No. V.

Short History of the Public Works Department
Pension Rules. (Vide page 146,—evidence of Mr.
W. S. Dorman.)

Royal Engineers had been recruited in the last few years. For the purposes of seniority Royal Engineers should always come in with the other officers.

72,598. The pay of Superintending Engineers was last raised in 1908. The present salary was from Rs. 1,500 to Rs. 2,000 and he suggested it should be raised to Rs. 1,750 to Rs. 2,500. Considering the responsibilities on a Superintending Engineer he was rather underpaid at present. The break at Rs. 800 should be abolished and officers who were qualified, whether they were holding an executive position or not, should advance to the maximum of the time-scale. The possibilities were greatly against his ever getting to the Rs. 1,250 rate without reaching a higher post.

72,599. Allowances were recommended for those who were out in country districts on account of the lonely life they had to lead, and for those in Presidency towns on account of the expense. A man in the most populous district would collapse under his financial burdens if he were not given an allowance, and therefore of the two the Presidency allowance was the most important. An addition of twenty-five to fifty per cent. on his salary would be a reasonable allowance. An allowance was now given to married officers as long as their wives were actually with them, but if the wife went away for three months the allowance was stopped. The allowance should be payable whether the wife was in the country or not, and it should also be extended to bachelors.

72,600. Further facilities should be given for study leave on the lines adopted in the Indian Medical Service.

72,601. With regard to a family pension fund, he had no specific proposals to put forward and considered that a scheme would have to be worked out on an actuarial basis. He thought officers would be quite prepared to have a family pension fund established without cost to the State if it was established on sound financial lines.

72,602. He emphasised the hardship caused by the present transfer allowance rules. The allowance to an Assistant Engineer on transfer was twenty maunds of luggage and double first class fare. Several general statements had been sent into him by officers and one or two detailed statements and he would put in three cases dealing with transfers between 1910-12.*

72,603. (Mr. Abdur Rahim.) Slightly more officers were employed on roads and buildings than on irrigation. In the construction of roads and buildings it was necessary to employ English trained men; he did not say Indians were not good enough, but for the general administration it was necessary to maintain a British element. For the work itself local men were quite good enough under British supervision. There was undoubtedly considerable engineering talent in India and the Indian element had largely increased in the service in the last twenty or thirty years, though in Bombay it happened to have gone down.

72,604. With regard to study leave a medical officer who took study leave was not bound to pass an examination but simply followed a definite course of study.

72,605. (Mr. Madge.) He did not consider that the suggestion that no one should be appointed to the Imperial service unless he had studied for three years in Great Britain would operate as a serious bar to the recruitment of engineering talent in India. If an

* Vide Appendix XV.

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[Continued.]

Indian had exceptional talent he could rise to administrative rank, and when he got to a high appointment there was little difference between his pay and the pay of the Imperial Engineers. In fact in the administrative grades he would not mind an officer being taken into the Imperial service and therefore he would qualify the remarks in the written statement to the extent of saying that when a Provincial officer reached an administrative post he should be taken into the Imperial service.

72,606. The allowance he claimed for men in isolated places was intended to cover the considerable expense an officer incurred in sending his family to a station which might be many miles away. It cost him a good deal to enjoy the amenities of civilised life. If an officer was in a station where he could meet friends it would be another matter.

72,607. (Mr. Fisher.) There were very few posts in the service where a training in mechanical engineering was of much use. His general view was that it was desirable to send an Indian to England not so much in order that he might obtain a superior technical training as in order that his views might get broadened. From the point of view of technical engineering facilities the Indian colleges were very good, though they were not quite so good as an English colleges. He would not send a man to England solely for mechanical engineering.

72,608. (Mr. Sly.) The present rule with regard to Royal Engineers was that they entered the department with seniority dating two and a half years after their first commission, and the intention of the rule was to put the Royal Engineer on an equal footing with a Civil Engineer of the same age; but he objected to the Royal Engineer being brought in anywhere except at the bottom of the list. It was one of the conditions of the service that a certain number of Royal Engineers should be employed, but the rule did not mean that they should be put in above men already in the department. The officers desired a guarantee that Royal Engineers should be brought in young.

72,609. His temporary colleagues (i.e., temporary engineers) asked for a provident fund on the lines of the fund for temporary employees on the State railways, to which he believed Government contributed cent. per cent. If an officer was dismissed for any glaring fault Government could withhold its contribution, but if he was discharged in the natural course of events he received the whole of the money to his credit in the fund.

72,610. He would only give the Bombay officers one allowance if they were given houses at the ordinary rental of 10 per cent. of their pay. There was considerable difficulty in inducing men to take appointments in Bombay; the only attraction seemed to be Secretariat experience, but that was not sufficient to make service in Bombay popular.

72,611. It was a fact that transfer allowances were not given when the transfer was made to Bombay. The twenty maunds allowed to an Assistant Engineer was supposed to be camp equipment and Government considered that there was no necessity for camp equipment if a man was in Bombay.

72,612. (Mr. Chaubal.) He believed there had been some deterioration in the candidates appearing before the selection committee in London, and he was of opinion that if the selection committee was reconstituted as suggested in the written statement the material obtained for the service would be considerably improved. He objected to a competitive examination because it would bring men into the service simply on the throw of one die, but he had no instance to show that where a system of competition amongst qualified candidates had been tried it had failed.

72,613. He did not think recruits realised the conditions of the service until they came into it and therefore there was still many applications on the part of qualified men. By raising the salaries, better material would be obtained and the service would be much more contented. The same proposition might be applied to the Provincial service, as the more the prospects were improved and the salaries raised the

(The witness withdrew.)

better and more contented the service would be. He would not say that because men were coming into the Provincial service on the present salaries no increase in the present salaries should be considered.

72,614. (Lord Ronaldshay.) A good engineer in England was more or less certain of employment, and a really first-class man would probably not take the trouble of going up for the service if he had to go through a competitive examination, unless he was specially keen to come out to India. A competitive examination might deter a great many good men from coming forward.

72,615. (Mr. Kent.) In connection with the various provident funds of municipalities and public bodies there was generally a condition that in the event of an officer's service being dispensed with before ten years he would not draw the contribution of the municipality or public body, and that appeared to be a fair condition to attach to a provident fund. If it was an ordinary case of reduction of establishment the contribution should be given to him. He thought a contribution by the State to a provident fund would work well, and probably the wishes of the department would be met by a combination of the pension system and a pension fund for widows and orphans on the lines prescribed for military services.

72,616. Daily allowance could not be claimed unless an officer travelled at least ten miles out and home from headquarters. If an officer did not go beyond a five mile limit he might travel thirty miles but would still get no daily allowance.

72,617. In the old days the Presidency allowance was fixed at Rs. 100 a month and house rent at Rs. 45 a month in the case of all officers, whether single or married, and officers were now worse off than they were under the old rules. There was no reason why a bachelor should be debarred from the allowance.

72,618. In some cases it was desirable that the State should employ experts and he would not bar a man from entering the service because he happened to specialise in one branch of engineering. A man might be required, for instance, who had a good knowledge of reinforced concrete construction, which was a very special thing.

72,619. Ninety-nine per cent. of the officers were of opinion that there should be no extensions beyond fifty-five years of age unless the officer retained was taken right outside the cadre.

72,620. (Mr. Advani.) It was only recently that Indians had risen to higher appointments. In administrative appointments they might get along in a sort of mediocre way, but they would not be as efficient as the men who came out from England. There was a great deal of selection for promotion but seniority counted very much. As a rule the best men were selected over the heads of others for administrative appointments, but not quite to the extent that they should be.

72,621. Officers should be encouraged in every way to go to England for part of their furlough, even subordinates; but the three years' training in England should be taken quite young when a man was more impressionable and open to British influences.

72,622. He would be against promoting into the Imperial service even a man of marked ability, because he would not have had an education in England; but he would be prepared to consider the question of providing an opening for Indians of marked ability.

72,623. In the interests of the State the Provincial service officers should be paid according to their market value, which should be fixed by the quality of the men who could be obtained on the terms offered. The probabilities were that up to a certain limit better men would be obtained by the grant of higher pay. At present there was discontent in the Provincial service and that might well affect their efficiency. The present state of pay for Executive Engineers in the Provincial service was low.

72,624. He would not tie a man down to one year's training with any one particular firm, but he would give him three or four months with different firms, and he thought it would be quite possible to make arrangements accordingly.

4 May 1914.]

Mr. H. A. HAINES.

At the India Office, London, Monday, 4th May, 1914.

PRESENT :

THE RIGHT HON. THE LORD ISLINGTON, G.C.M.G., D.S.O. (Chairman).
 THE EARL OF RONALDSHAY, M.P.
 SIR MURRAY HAMMICK, K.C.S.I., C.I.E.
 SIR THEODORE MORRISON, K.C.I.E.
 SIR VALENTINE CHITOL.

MAHADEV BHASKAR CHAUBAL, Esq., C.S.I.
 ABDUR RAHIM, Esq.
 FRANK GEORGE SLY, Esq., C.S.I.
 JAMES RAMSAY MACDONALD, Esq., M.P.

M. S. D. BUTLER, Esq., C.V.O., C.I.E.
 R. R. SCOTT, Esq. } (Joint Secretaries).

HERMANN A. HAINES, Esq., Secretary, Public Works Department, India Office.

Written Statements relating to the Public Works and Railway Departments.

I. Extracts from a Memorandum on appointments made by the Secretary of State for India in Council.

72,625. *Indian Public Works Department and Indian State Railways. (Engineering Branch).*—The present system of recruitment was adopted in 1905 after the closing of the Royal Indian Engineering College, Coopers Hill. The appointments are widely advertised in the Press, and the selection of candidates is made by a Committee of three persons appointed for the purpose each year by the Secretary of State. This Committee has on each occasion consisted of (1) the Member of the Council of India who is Chairman of the Public Works Committee; (2) Colonel Sir John Ottley, K.C.I.E., formerly President of the Royal Indian Engineering College, Coopers Hill; and (3) one member nominated by the Council of the Institution of Civil Engineers. In 1910, 1911, 1912 and 1913, the Committee consisted of (1) Sir Hugh Barnes, K.C.S.I., K.C.V.O.; (2) Colonel Sir John Ottley, K.C.I.E., R.E.; and (3) Sir Alexander Binnie, Kt.

Indian State Railways (Assistant Traffic Superintendents).—For these appointments recruitment is made three-fifths in England and two-fifths in India. The recruitment in England is not undertaken at fixed periods, but on a specific demand from India for a stated number of men. When such a demand is received a Selection Committee (consisting generally of the Member of the Council of India who is Chairman of the Public Works Committee, the Government Director of Indian Railway Companies, and the Secretary of the Public Works Department, India Office) is appointed by the Secretary of State. The Selection Committee consider any applications which may have been made since the last recruitment, and are awaiting the occurrence of further vacancies, and further invite by special letter (a) the principal railway companies in the United Kingdom to make known the appointment to any suitable candidate with sufficient railway experience, and (b) the Appointments Committees of Oxford and Cambridge and any other University that may apply to be furnished with such notices to suggest suitable University candidates. When all the applications have been received every candidate who is qualified under the regulations and is not *prima facie* quite unsuitable is invited to an interview with the Committee, who then make their selections. There is no rule as regards the relative proportions of men with railway experience and University men appointed, but the Committee are guided, in the absence of an expressed wish on the part of the Government of India, by the relative suitability of the candidates who present themselves.

(2) Recent Selection Committees have been constituted as follows:—

Sir H. S. Barnes, K.C.S.I.,
 K.C.V.O., Chairman of the Public
 Works Committee of the Council
 of India.

A. Brereton, Esq., C.S.I., Govern-
 ment Director of Indian Railway
 Companies.

H. A. Haines, Esq., Secretary,
 Public Works Department, India
 Office.

August 1911.
 August 1912.
 January 1913

Sir James Thomson, K.C.S.I., Act-
 ing Chairman of Public Works
 Committee.
 A. Brereton, Esq., C.S.I.
 H. A. Haines, Esq. } August 1913.

(3) Miscellaneous Public Works Appointments.

—The India Office is occasionally called upon to engage other persons for special appointments in Indian Service. These appointments are not made on the advice of a formally constituted Selection Committee. They are comparatively few, the rate of recruitment is low and irregular, and candidates with specialised or technical training are required. Thus within the last five years Consulting Architects have been engaged for the Governments of Bombay, Bengal, Eastern Bengal and Assam, Burma, and the United Provinces. It has been the practice to request the President of the Royal Institute of British Architects to nominate suitable candidates for these appointments. Assistant architects have also been engaged for several of the Local Governments in India, the selection of candidates being, at the request of the India Office, made by the President of the Architectural Association. There are also from time to time requests from India for the engagement of electrical engineers or other engineers with special qualifications. The method of filling such appointments depends on the circumstances of each case and a suggestion as to the method of recruitment not infrequently accompanies the demand. Public advertisement is made when necessary.

(4) Applications for special appointments of this kind are recorded in the Public Works Department of the India Office, and on occurrence of a vacancy for which the applicant is *prima facie* suitable, care is taken to see that his application is considered along with those of other candidates. Appointments such as electrical inspectors, experts for supervising water-borings, plumbers, mechanics, foremen, electricians are occasionally made. The expert advisers consulted in such cases vary according to the nature of the appointments.

Public Works Department.—II. Supplementary Note by Mr. Haines.

72,626. A memorandum prepared in this Office regarding recruitment for the Public Services in India through the channel of the Public Works Department, India Office, has already been laid before the Royal Commission. I now submit a Supplementary Note with annexures.

(2) The first annexure is a Statement showing the number of appointments made through the Public Works Department of this Office to the superior establishments of the services of the Government of India since 1st January 1911, and the manner in which the selections were made.

(3) In regard to the appointment of Assistant Engineers, the following further observations may be made. The question of the qualifying degrees of candidates has been the subject of prolonged consideration. I attach (Annexure II.) a copy of Appendix I. of the Regulations in the revised form in which it has been approved by the Secretary of State in Council for appointments to be made in 1915.

(4) In paragraph 5 of the Regulations* for appointments of Assistant Engineers, it is laid down that not less than 10 per cent. of the appointments

* See Memo above.

4 May 1914.]

Mr. H. A. HAINES.

[Continued.]

will be reserved for Indians. This rule had its origin in the time of Coopers Hill College. The College at that time admitted students to the number of about 50 a year; and about 12 engineering appointments were offered each year to the most successful students at the end of their course. The College was open to Indians as well as Europeans. The following rule was inserted in the College Prospectus for 1901:—

“Natives of India who are British subjects have the exclusive right to enter the Public Works and Telegraph Departments through the Indian Engineering Colleges. They cannot claim, therefore, the right of admission to the Royal Indian Engineering College, which is maintained for the training of Europeans, with a view to compete for the appointments given to its students.”

“Nevertheless, when there is spare accommodation, the President has discretionary power to admit natives of India who are British subjects, and two appointments in those services, but not more than two in the aggregate in each year, may be awarded to such students.”

(5) When the College was closed in 1906, the provision for the appointment of Indians to the Imperial Service of the Public Works Department was

continued, and a rule was inserted in the Regulations to the effect that the total number of natives of India appointed in any year under these Regulations “shall not exceed 10 per cent. of the total number of Assistant Engineers thus recruited.” This was changed in 1909, and the rule altered to provide that “Natives of India shall be selected to the extent of 10 per cent. of the total number of Assistant Engineers thus recruited, if duly qualified.”

This rule is still in force.

(6) It may be added that the Reports of the Selection Committee show a continuous improvement in the standard of Indian candidates since the present system of selection came into force.

(7) With regard to the appointments of Architects and to most of the other Miscellaneous appointments shown in Annexure I., it may be stated that the appointments are made in the first instance on short agreements for five or three years, but at the end of the first term, the services of the officers are generally retained on fresh conditions involving a higher salary. These fresh conditions are recommended by the Government of India and approved, with or without modifications, by the Secretary of State. There are no regulations on the subject.

ANNEXURE I.

PUBLIC WORKS DEPARTMENT.

Appointments made to the Superior Establishments of the Services of the Government of India since 1st January 1911.

Appointments.	Year.	Number of Appointments made.	Salaries of Appointments.	By whom Candidates were selected.
(i) Assistant Engineers (Imperial Service) in the Public Works and State Railway Departments.	1911 1912 1913	23* 20 33	Commencing at Rs. 380 a month. Do. Do.	Selection Committee appointed by the Secretary of State, consisting of Sir Hugh Barnes (Chairman of the Public Works Committee of the Council of India), Colonel Sir John Ottley (late President of Coopers Hill College), and Sir Alexander Binnie (representing the Institution of Civil Engineers).
(ii) Temporary Engineer for deep borings for artesian wells, Bombay.	1913	1	Rs. 700–800 a month.	Ingersoll Rand Company.
(iii) Assistant Electrical Engineer for Oudh and Robilkund Railway.	1914	1	—	Selected by Consulting Engineer, but appointment actually made in India, the candidate having in the meantime proceeded to India on his own account.
(iv) Assistant Signal Engineer for Indian State Railways.	1912	1	Rs. 350–25–400 a month.	Consulting Engineer to the Secretary of State for India.
(v) Workshop Accountant for Indian State Railways.	1913	1	Rs. 600–50–900 a month.	Mr. W. F. O'Donoghue, late Accountant-General and Secretary to the Government of India in the Public Works Department.
(vi) Assistant Traffic Superintendents, Indian State Railways.	1911 1912 1913 1914	5 3 8 1	Commencing at Rs. 350 or Rs. 400 a month. Do. Do. Do.	Selection Committee appointed by the Secretary of State, consisting of the Chairman of the Public Works Committee of the Council of India, the Government Director of Indian Railway Companies, and the Secretary in the Public Works Department of the India Office.
(vii) Assistant Locomotive and Carriage and Wagon Superintendent, Indian State Railways.	1911 1912 1913 1914	6 4 7 4	Commencing at Rs. 300, 350, or 400 a month. Do. Do. Do.	Consulting Engineer to the Secretary of State for India.
(viii) Assistant Coal Superintendents, Indian State Railways.	1913 1914	2 1	Rs. 450–50–600 a month. Do.	Director-General of Stores in consultation with Consulting Engineer. H.M.'s Chief Inspector of Mines, Home Office.
(ix) Assistant Laboratory Officer, Indian State Railways.	1913	1	Do.	Director-General of Stores in consultation with Consulting Engineer, and the Director of the National Physical Laboratory.
(x) Assistant Chemist, Indian State Railways.	1913	1	Do.	Do. do.

* Made by the Judicial and Public Department.

4 May 1914.] Mr. H. A. HAINES. [Continued.				
Appointments.	Year.	Number of Appointments made.	Salaries of Appointments.	By whom Candidates were selected.
(xi) <i>Electrical Inspectors for Local Governments in India.</i>	1913	1 (Madras). 1 (United Provinces).	Rs. 600 a month. Rs. 700 a month.	Director-in-Chief, Indo-European Telegraph Department. Director-General of Stores in consultation with Mr. Goument, late Chief Engineer and Secretary to the Government of the United Provinces in the Public Works Department.
(xii) <i>Architects:—</i>				
(a) Consulting Architects	1911	1 (Burma).	Rs. 800-50-1,000 a month.	President, Royal Institute of British Architects.
	1912	1 (United Provinces).	Do.	Do. do.
	1913	1 (Punjab).	Do.	Do. do.
(b) Assistant to Consulting Architect.	1913	1 (India).	Rs. 600-40-800 a month.	Do. do.
(c) Assistant Architects.	1912	4	Rs. 340-40-500 a month.	President of the Architectural Association.
	1913	2	Do.	Do. do.
	1914	2	Rs. 540-40-660 a month.	(1) President of the Royal Institute of British Architects, and (1) President of the Architectural Association.
(d) Architectural Draughtsman.	1913	1	Rs. 500-50-600 a month.	Mr. E. L. Lutyens, Architect for New Delhi.

ANNEXURE II.

DRAFT OF APPENDIX I. FOR PUBLIC WORKS DEPARTMENT REGULATIONS, 1915.

LISTS OF DEGREES REFERRED TO IN PARAGRAPH 6.

The degrees shown in Lists A and B are accepted without reservation in the case of candidates who matriculated on or before 30th June 1914. The special condition applicable to candidates who matriculated on or after 1st July 1914 are stated in the Notes appended to the two lists.

Candidates who reply on a degree in "Mechanical" or "Electrical" Engineering or in "Naval Architecture" should have had at least one year's practical experience in Civil Engineering.

List A.

Oxford.—B.A. (with Honours in the Engineering Science Final Honours School).
Cambridge.—B.A. (with Honours in Mechanical Science Tripos).
St. Andrews.—B.Sc. in Engineering.
Glasgow.—B.Sc. in Engineering.
Edinburgh.—B.Sc. in Engineering.
Dublin.—B.A.I. with Honours in Engineering.
London.—B.Sc. with Honours in "Civil and Mechanical" or "Electrical" Engineering.
Victoria University (Manchester).—B.Sc. with Honours in Engineering.
Birmingham.—B.Sc. with Honours in "Civil," "Mechanical," or "Electrical" Engineering.
Liverpool.—B.Eng., with Honours in "Civil," "Mechanical," or "Electrical" Engineering, or Naval Architecture.
Leeds.—B.Sc., with Honours in "Civil," "Mechanical," or "Electrical" Engineering.
Sheffield.—B.Eng., with Honours in "Civil," "Mechanical," or "Electrical" Engineering.

Note to List A.—In the case of candidates who matriculate after 30th June 1914 the above degrees will be accepted only if taken after three years' study in the several Universities, but this condition will not apply to Indians who, having taken an Indian degree which exempts them from part of the University

course, shall have taken one of the above degrees in less than three years in accordance with the regulations of the University concerned.

List B.

Dublin.—B.A.I.
Durham.—B.Sc. in "Civil," "Mechanical," or "Electrical" Engineering, or in Naval Architecture.
London.—B.Sc. (Engineering).
Victoria University (Manchester).—B.Sc. Tech. in "Mechanical" or "Electrical" Engineering (Honours Division in the Final Examination).
University of Wales.—B.Sc. (in "Civil," "Mechanical," or "Electrical" Engineering).
Birmingham.—B.Sc. (Engineering).
Liverpool.—B.Eng.
Leeds.—B.Sc. in "Civil" or "Mechanical" Engineering.
Sheffield.—B.Eng. (First Class in the Final Examination).
National University of Ireland.—B.E.
Bristol.—B.Sc. in "Civil" or "Mechanical" Engineering.

Note to List B.—In the case of candidates who matriculated after 30th June 1914 the degrees in List B will be accepted only if (1) the matriculation or other entrance examination accepted by the Institution of Civil Engineers to the Engineering course in the University has been passed, and (2) a regular course of study occupying not less than three academic years has been pursued in the University between the passing of such matriculation or other entrance examination and the passing of the final examination for the degree.

But Indians who have taken an Indian degree which exempts them from part of the University course will be regarded as having satisfied condition (1) and will be exempted from condition (2) if their degree has been obtained in less than three years in accordance with the Regulations of the University concerned.

4 May 1914.] Mr. H. A. HAINES. [Continued.

ANNEXURE III.

Note by Sir A. M. Rendel, dated 22nd April 1914, on his Procedure in Getting and Choosing Candidates.

I should premise that I am not concerned with the appointments to the Civil Engineering section of the P.W.D. but, as Mr. Haines says, I am referred to when men are wanted for the locomotive, carriage and wagon, electric, and other mechanical departments of Government railway management; and I, or rather my firm, are applied to by our other Indian clients for all descriptions of railway appointments of the mechanical class, and some others as well.

Our mode of action in obtaining the men indented for is advertisement in the Press. A paper containing questions as to age, nationality, education (general and professional), practical experience, &c., is then sent to all of the applicants who seem to require consideration. These papers and a personal interview with those whose answers promise well, form the basis of the final selection. In no case is there any favouritism in any way, except so far as this, that, *ceteris paribus*, we incline, with the full assent of our clients, to a preference to the sons or near con-

nections of men who have done good service to the Government of India.

The number and quality of the applicants varies greatly, depending a great deal on the activity of railway construction in the world of British enterprise; but I am safe in saying that the higher values attached of late years to the theoretical education noticeable in all occupations is having its full effect on the civil engineer, who is now frequently able to show a diploma or degree—often with honours—from some University or first-class teaching authority, and as a matter of fact we are now able to almost confine our recommendations to men who can produce one. It is not so marked in the other branches of my profession, but it is to a great extent compensated for by a longer and more searching practical training, and by the opportunities offered by the evening schools maintained by many of the great English railway companies, of which many young men fully avail themselves.

ANNEXURE IV.*

(i) Return showing for the year 1911-13 the number of Indian applicants for appointment as Assistant Engineer, &c.

	1911.	1912.	1913.	Total.
Number of qualified candidates	10	13	16	—
Number of appointments made	3	3	4	10

(ii) Provinces from which 10 Indians appointed as Assistant Engineers in 1911-12-13 came:—

	1911.	1912.	1913.	Total.
Punjab	1	2	4	7
Bombay	1	—	—	1
Burma	1	—	—	1
Hyderabad	—	1	—	1
	3	3	4	10

(iii) Universities at which 10 Indian Assistant Engineers appointed in 1911-12-13 took their course:—

	1911.	1912.	1913.	Total.
London	1	1	3	5
Glasgow	—	1	1	2
Edinburgh	1	—	—	1
Manchester	—	1	—	1
No University	1	—	—	1
	3	3	4	10

* This Annexure was put in by Mr. Haines after his oral examination, vide paragraph 72,628.

4 May 1914.]

Mr. H. A. HAINES.

[Continued.]

ANNEXURE V.*

Statement showing (a) number of natives of India who have applied for appointment as Assistant Engineers in Indian service and (b) number of natives of India appointed in years 1905-1914

Year.	Number of Indian Applicants.	Number of Indians qualified for appointment.	No. of Indians selected.
1905	No record	No hard and fast line was drawn in these years between "qualified" and "un-qualified" candidates.	—
1906	1		—
1907	—		—
1908	8		—
1909	13		3
1910	16	7	3
1911	20	10	3
1912	16	13	3
1913	22	16	4
1914	31	21	3

* This annexure was put in by Mr. Haines after his oral Examination, vide paragraph 72,628.

ANNEXURE VI.*

Statement showing amount of professional experience possessed at the time of their selection by Assistant Engineers appointed during the years 1905-1914.

Year.	No. of appointments made.	No professional experience.	One year's experience or less.	More than one year's experience.
1905	25†	2	11	12
1906	14†	1	7	6
1907	17	—	6	11
1908	39	—	14	25
1909	30	—	5	25
1910	25	1	7	17
1911	23	—	—	23
1912	20	1	8	11
1913	33	—	13	20
1914†	30	—	18	12

* This annexure was put in by Mr. Haines after his oral Examination, vide paragraph 72,628.

† In addition to appointments made from the Royal Indian Engineering College, Coopers Hill.

‡ No appointments have yet been made in 1914. The figures refer to the candidates selected for appointment and may require revision.

Mr. H. A. HAINES called and examined.

72,627. (Chairman.) The witness was Secretary of the Public Works Department of the India Office and a member of the Selection Committee for certain traffic appointments.

72,628. He put in a return† showing for the last three years the number of applicants for appointments who were non-Europeans, and he undertook to put in a further return showing the number of candidates selected for the Public Works Department and the Railway Department, and distinguishing those who had had no professional experience from those who had had a year's professional experience or more.†

72,629. (Lord Ronaldshay.) Under the present rule Indians had to be appointed to the extent of 10 per cent., but it was not meant definitely to limit them to that percentage, though, as a matter of fact, the 10 per cent. had not been exceeded. He was not able to say whether under the rule Indians had been appointed who would not have been appointed if the rule had not been in existence, but he knew, as a matter of fact, that three or four years ago it was felt that some Indian candidates, who were only just up to the standard of qualification, would not have stood a chance unless they had been appointed under the 10 per cent. rule.

† Vide annexures IV, V and VI to written statement.

72,630. (Sir Theodore Morison.) It was a fact that the first Selection Committee reported that they would not have selected those two or three Indian candidates but for the operation of the 10 per cent. rule, but he understood that Indians were now coming forward with better qualifications. The rules as to qualifications had been recently revised so as to conform with the rules observed by the Institution of Civil Engineers, but a special exception had been made so as to allow Indians possessing an Indian degree to come forward as candidates for the Public Works Department although their qualifications would not be up to the standard prescribed by the Institution of Civil Engineers.

72,631. (Mr. Chabul.) The rule in force at Cooper's Hill stipulated that the 10 per cent. should not be exceeded, but the wording of the rule was afterwards altered. He understood that the interpretation of the wording of the regulation as it stood would not prevent the appointment of more than 10 per cent., although more than 10 per cent. had not been appointed in the past. It was, however, an accident that there was not an additional Indian appointed last time. The original wording was, "shall not exceed 10 per cent.," and that was altered to, "be selected to the extent of 10 per cent.," but it had not been understood in the India Office that only 10 per cent. could be selected.

4 May 1914.]

Mr. H. A. HAINES.

[Continued.]

72,632. (Mr. Sly.) The number of European candidates in 1911 was 89, and the number of Indian candidates fully qualified 10, so that there were only 99 fully qualified candidates in 1911 for the Indian Public Works and State Railway Department. The figures given in his written statement represented the total number of applicants and not those who were interviewed. All candidates who were fully qualified under the rules were interviewed.

72,633. Sir Alexander Binnie was at one time a member of the Selection Committee, nominated by the Institution of Civil Engineers, but for the present year the Institution had nominated Mr. Elliott Cooper.

72,634. The Selection Committee, appointed by the Secretary of State to advise him in connection with the appointment of Assistant Traffic Superintendents, included the Government Director of Indian Railway Companies, who had fairly recent experience of railway management in India.

72,635. (Mr. Macdonald.) Some of the appointments were made on the advice of one individual; for instance, the appointments of Assistant Coal Superintendents were made on the advice of His Majesty's Chief Inspector of Mines. The Chief Inspector recommended and the Secretary of State accepted his nomination. He did not think these appointments were advertised in the papers, but the Chief Inspector circularised the managers of a great number of coal mines. The first appointment, in 1913, of an Electrical Inspector was made on the sole advice of the Director-in-Chief of the Indo-European Telegraph Company, who was in touch to some extent with the Electrical Inspector in the Stores Department. He believed that post was advertised, and the same remark applied to a good many of the positions alluded to in his written statement. The posts of architects were not advertised as the principal architectural institutions, with which all architects were in touch, were approached on the occurrence of a vacancy. There was no rule that certain vacancies carrying a certain salary must be advertised, and he did not think a universal rule would be possible, as some of the appointments were very special; for instance, a person had to be obtained who was experienced in deep boring, and for that purpose the Ingersoll-Rand Company had to be approached, this being practically the only firm which could supply a man with the special training required. He did not think there would be any harm in having a rule by which appointments would all be advertised.

72,636. (Mr. Abdur Rahim.) With regard to the Indians who had got in under the 10 per cent. rule, but who otherwise would not have had a chance, he explained that the standard they had reached barely qualified them for appointment. It was quite possible, on the other hand, that the rule excluded some Indians

(The witness withdrew.)

who were really good men. No applications were received from Indians for some of the special appointments mentioned in the written statement. Very few Indians had received a training fitting them for most of those positions. He believed one did apply for the position of Electrical Inspector, but it was the only application received from an Indian. There were some Indians who were training for electrical engineering in Great Britain, but he knew of none who were working in the locomotive and carriage and wagon workshops of British Railways.

72,637. He considered it was almost impossible to have a competitive examination for Assistant Engineers as so much depended on the candidate's practical experience and capability of working. Testimonials were required from engineers under whom they had been employed to show that they were fit for practical work. A competitive examination was possible in India as the candidates had been under observation for a long time and their fitness was known; but if an examination was held in England for public works appointments there would be very little to go upon as to the fitness of the candidates for their work. He did not think anyone would accept a theoretical examination as the best way of obtaining engineers for India.

72,638. In the three years 1911-13, as far as selected candidates were concerned, five Indian engineering students came from the London University, two from Glasgow University, one from Edinburgh, one from Manchester, and one from no university at all.

72,639. The paragraph in his written statement alluding to the reports of the Selection Committee as showing a continuous improvement in the standard of Indian candidates, referred to the year 1910.

72,640. (Sir Valentine Chirol.) He had had no experience of India, although he was born there.

72,641. There was no general rule, when an appointment was made on the advice of a single individual, to determine who that individual should be. Very often the Government of India themselves suggested someone, and, as a matter of fact, did suggest the Inspector of the Home Office as a suitable person to advise, but if the suggestion had not come from the Government of India, it was very possible that the India Office would have written to the Home Office asking whom they would recommend. The head of the department would probably make enquiries as to the most suitable manner in which the selection should be made and then submit his proposals to the Secretary of State. When a special recommendation was made by the Government of India, that recommendation was not acted upon automatically but was dealt with on its merits by the Secretary of State in Council. As a matter of fact, in practice a recommendation of that sort from the Government of India would very rarely, if ever, be ignored.

At the India Office, London, Wednesday, 6th May, 1914.

PRESENT:

THE RIGHT HON. THE LORD ISLINGTON, G.C.M.G., D.S.O. (Chairman).

THE EARL OF RONALDSHAY, M.P.

SIR MURRAY HAMMICK, K.C.S.I., C.I.E.

SIR THEODORE MORISON, K.C.I.E.

SIR VALENTINE CHIROL.

MAHADEV BHASKAR CHAUBAL, Esq., C.S.I.

ABDUR RAHIM, Esq.

FRANK GEORGE SLY, Esq., C.S.I.

HERBERT ALBERT LAURENS FISHER, Esq.

JAMES RAMSAY MACDONALD, Esq., M.P.

M. S. D. BUTLER, Esq., C.V.O., C.I.E.

R. R. SCOTT, Esq.

} Joint Secretaries.

COLONEL SIR JOHN W. OTTLEY, K.C.I.E., late R.E., M.Inst.C.E.

Written Statement relating to the Public Works Department.

72,642. I gather that the special reason that prompted the suggestion that I should give evidence before the Royal Commission is that for the last 14

years I have had peculiar opportunities—first as President of the Royal Indian Engineering College, Coopers Hill, and then as a member of the Selection Committee—of forming an opinion as to the quality of the assistant engineers appointed during that period. Quite apart from this, there are other

6 May 1914.]

Colonel Sir JOHN OTTLEY.

[Continued.]

reasons that, I think, qualify me to express an opinion on the subject of the recruitment of the Public Works Department.

72,643. I commenced my professional career as a civil engineer in India as far back as 1858, when I was articled to the chief engineer of the Great Indian Peninsula Railway in Bombay. Consequently my personal acquaintance with India is a fairly lengthy one, whilst I have been connected with it by family ties for nearly a century, my father (an infantry officer in the H.E.I.C.'s service) having acted as an assistant engineer in the Bombay Presidency, where I was born in 1841. As a matter of fact I have been myself more or less closely connected with the Public Works Department for more than 45 years, and during that time have been associated with a great number of engineers drawn from a variety of sources, whilst many Coopers Hill men have served in India under my orders since the College was first established. Lastly, I was employed for some five months in 1894 as a member of the "Lyll Committee" which was constituted to deal with the question of the re-organisation of the Military Works and Public Works Departments, so that 20 years ago I had to make a special study of this question of recruitment.

72,644. From the wording of a communication received from the India Office, in which I am credited with possessing a "unique experience of the quality of the candidates who have for many years past obtained appointments in the Railway and Public Works Departments," I am not quite sure whether it is intended that I should institute a comparison between the assistant engineers from Coopers Hill and those obtained under the selection system. But in case this should be the intention, I will endeavour to explain as briefly as possible why it is really not in my power to frame any such comparison as would be of practical value. Indeed, in my judgment, the only persons in a position to form any reliable opinion on this subject must necessarily be those under whom both classes have served on actual work for some considerable length of time. I may add, however, that I take leave to doubt whether any comparison of this sort would now serve any useful purpose. It seems to me that the points of real interest to-day are—(i) how far the existing system gives us the requisite material for India; and (ii) what (if any) changes are desirable to further improve that material and bring it up to the standard required.

72,645. In the first place, it is absolutely essential to arrive at a clear understanding of what is connoted by the word "quality." I should be disposed to say that it includes qualifications under the following three distinct heads:—

(i) The technical education of a civil engineer as tested by a University diploma or equivalent examination;

(ii) The possession of knowledge of many technical matters either peculiar to or especially required in India, for instance, plane table surveying, the methods of taking discharges, the preparation of materials, Indian building construction, the accounts and rules of the Public Works Department, the methods of executing work in India, and some general knowledge of the country, its inhabitants, its geology, &c.; and

(iii) The possession of qualities that cannot be tested by any examination, but which are really far more important than any amount of technical knowledge; I mean, for instance, a high moral standard, commonsense, good temper, a sense of justice, discipline, powers of observation and initiative, and readiness to accept responsibility.

72,646. Now, under the first head I do not think that there is a pin to choose between the *best men* appointed from Coopers Hill and the *best men* obtained under the present system. In either case, however, the term "*best men*" under this head only covers a comparatively small percentage of the total number of candidates. As regards the balance, I am distinctly of opinion that—*taking this test alone*—the average product of the selection system compares favourably with the average Coopers Hill student. This is only what might have been expected as only men up to the diploma standard appear before the Committee.

72,647. Before passing on, I think it desirable to invite attention to a fact which, it seems to me, is often lost sight of, viz.:—that it is quite unnecessary that the whole or even a large proportion of the recruits should hold very high academic distinctions. I think all experience goes to show that it is by no means those who possess the greatest amount of "book learning" who turn out to be the most valuable officers. Of course, it is desirable that a certain number should be thus distinguished, but it should at the same time be borne in mind that the vast mass of the work to be done does not require these qualifications and that to employ a "1st class Honours" man for years together in carrying out the ordinary work of the Public Works Department is very much on a par with using a razor to chop wood blocks with, and very often results in completely spoiling both the instrument and the work. In short, for the ordinary work of the Department, the qualities outlined in head (iii) above are really of far greater importance than any amount of high technical and mathematical knowledge.

72,648. Turning now to the 2nd head (ii) above I would explain that every Coopers Hill student acquired more or less knowledge of these special matters whereas the recruits obtained under the selection system are necessarily almost invariably ignorant of them. It is, of course, quite true that this knowledge can be gradually picked up at a later stage after reaching India, but the broad fact remains that—*under this head*—the assistant engineers appointed from Coopers Hill were better fitted on joining to carry out the duties required of them than are the men now being sent out under the selection system.

72,649. It is, however, under the third head, the possession of qualities that cannot possibly be tested by any form of examination, that the difficulty of forming any reliable comparison becomes positively insuperable. At Coopers Hill the students were under my close observation both at work and play for three years, and I was, therefore, in a position to frame a fairly accurate estimate of what they really were. During the course I was able to weed out a certain number of undesirables, whilst in many cases the rough diamonds entering the College were cut and polished out of all recognition when they left Coopers Hill. A high moral tone and strict discipline was insisted on and a strong *esprit-de-corps* was fostered, which undoubtedly made for good results subsequently. I felt, therefore, fairly certain that, at any rate, a large proportion of those completing their course would develop into really good officers. Under the selection system, on the other hand, we know little or nothing of the candidates under this head, and the result is consequently very much a matter of chance. It is only possible to form a crude guess at these matters from a perusal of the letters of recommendation sent in and a short ten minutes' interview with each candidate. I have absolutely no doubt whatever that under the new system we have been able to nominate a very fair number of exceedingly good recruits, but I should hesitate to speak with any confidence as to others who may or may not eventually be found to possess the qualities essential to the making of a good and reliable officer.

72,650. So much was I impressed with these facts and also with the want of knowledge of the special technical matters referred to above, that after the closure of Coopers Hill College, but prior to the sale of the property, I suggested to the then Permanent Under Secretary that an ideal system would probably be to select the men as at present and to then send them for a year or two to Coopers Hill for instruction in the matters referred to, thus also affording some opportunity of ascertaining what the men really were as opposed to merely what they knew. It seemed to me that in this way it might also be possible to secure some continuity of the *esprit-de-corps* to which I attached considerable importance, and which I thought it desirable to preserve for the benefit of the service. My proposal was, however, considered to be outside the range of practical politics, and was, therefore, dropped.

72,651. From what has been said above, it will, I hope, have been made clear why it is impossible for me in the circumstances to formulate any comparison

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between the products of the two systems with which I have been so long connected.

72,652. I have already said that in my judgment the really important points for present consideration are as to whether the present system affords the requisite material and whether any further change can be recommended. I propose in the following paras. to deal separately with the question of the selection respectively of European and native assistant engineers.

72,653. As regards *European assistant engineers*, I am unable, as matters stand, to suggest any better plan than that which now obtains, except that I should not be disposed to lay much, if any, stress on the supposed necessity for practical training in this country, and would strongly recommend that every man selected should be sent out *on probation* for three years, by which time the authorities in India ought to be able to decide whether he is worth retention or not. It seems to me that no man worth having need fear this test, whilst if any undesirable should be eliminated it would certainly be to the advantage of the service and of India generally. It should, of course, be provided that any man thus sent back at any time during his period of probation should be provided with his passage back, as also his salary to date of landing in England, unless he be dismissed for some serious fault beyond mere unsuitability for the service.

72,654. Turning now to the class of *native assistant engineers*, I must record my matured conviction that it is radically wrong to make these appointments in England. I originally formed this opinion at Coopers Hill, where we had quite a number of native students, and the view then formed has been strengthened each succeeding year. It is an opinion, moreover, fully shared by every officer—both of the Public Works Department and the Indian Civil Service—with whom I have discussed the question, and also by natives themselves, both parents and candidates. I hold that it is absolutely wrong on principle to induce young Indians to come to this country on the mere chance of securing a valuable prize. Whilst Coopers Hill lasted, the evils were greatly minimised because, if a candidate failed at the entrance examination, he had at any rate lost comparatively little money or time, whilst if he succeeded in entering the college he had a fair chance of an appointment, and was, moreover, well looked after during his stay in England. Under the selection system on the other hand, the candidate is compelled to reside in this country for some three or four years at an expenditure running into many thousands of rupees, with, in many cases, no one to look after and care for him. At the end of his studies he has about a one in ten chance of being selected, as there are only some two or three appointments annually available for some 20 or 30 applicants. The vast majority must, therefore, return to India without a Government appointment, and with very little hope of obtaining any other employment. Can it therefore be wondered at that all these unfortunates go back to India thoroughly disappointed, disheartened and dissatisfied, and full of resentment at a system which has led to their incurring such heavy losses? It may not be out of place here to point out that some at any rate, and I think an increasing number of these candidates are the sons of subordinates in the Public Works Department, Supervisors and Overseers, drawing comparatively small pay, who can certainly ill afford to risk the loss of so large a sum as, say, £1,000 and who certainly ought not to be tempted to incur that risk.

72,655. I have endeavoured to show above that the system is wholly wrong whether we regard it from the point of view of the parent or the candidate. It is equally unwise from that of Government, as the Committee have absolutely no knowledge of the candidates, and it is far less easy to be sure that the most suitable men are chosen from amongst the native candidates than is the case with the Europeans, and this, as already pointed out, is by no means a simple problem. Quite apart from this, there is the further difficulty that a man so chosen in London is as likely as not to be posted to any province but his own, and

in that event will be quite as much a "*pardesi*" or "*foreigner*" as any European, having to learn a new language, and being out of touch with everything and everybody. On the one hand he will not have the prestige of the European, nor the support, sympathy, and social amenities of the people of the country. In short, he will be in all probability a veritable Ishmael with every man's hand against him.

72,656. The only possible remedy appears to me to be that native assistant engineers should be appointed in India on the recommendation of local Governments and administrations who should be required to employ the men so recommended in their own territories. In my judgment there is absolutely no necessity for insisting in their case on a course of training in this country; indeed, I am inclined to think that more useful men from the departmental standard could be secured from the Indian colleges.

72,657. So long as native assistant engineers are appointed in this country under the existing system, so long will it be necessary to appoint them on exactly the same pay and conditions as the Europeans appointed at the same time, and it was on the assumption that the Secretary of State might consider it necessary to adhere to these grants that I suggested some 15 months ago that the Government of India should be permitted to allot the small number of appointments thus available as special prizes to the various engineering colleges to be awarded to men of the different provinces in turn. I desire, however, to record my opinion that there is really no justification for offering to natives of India the salaries that are held to be necessary to secure the right stamp of European for the Indian service. I base this opinion solely on the fact, which I do not think anyone would care to deny, that the necessary expenses of a European Engineer in India are vastly greater than those of a native doing precisely the same work, so that the salary on which a European manages to live decently is really a splendid salary to a native, who probably is able to save three-fourths of it. To make this quite clear, I would point out that the salary that our young assistant engineers could hope to draw in England would certainly not be in excess of £100 to £150 a year, whilst many of them would be glad to get £50 a year. In order to induce these young men to take service in India, it is thought proper to offer them a commencing salary of Rs. 4,560, or, say, £300 a year, and we offer the same salary to young natives, some of whose parents, to my knowledge, cannot be drawing half that amount after, perhaps 30 or 40 years' service. I would invite attention to the fact that the present system of paying native assistant engineers recruited in England far higher salaries than those paid to their countrymen appointed from the Indian colleges, who are performing precisely similar work, must necessarily cause great heart-burning, and will, I believe, lead to trouble hereafter. It is also unfair to the finances of India that more pay than is warranted is disbursed to the men in question.

72,658. It appears to me that the justification for the employment of Europeans is the belief that they render more efficient service, whilst their salaries have been fixed on the ground that they cannot be obtained for less money. As soon as it can be shown that the work can be performed equally well by native and therefore cheaper agency, the latter may be expected to replace the European much to the advantage of the finances of the country. It is obvious, however, that nothing is to be gained by unnecessarily levelling-up the salaries of the men of the country.

72,659. It may not, perhaps, be out of place if I add, in conclusion, that no matter how good the system of recruitment may be, full value will never be obtained unless care is taken to see that all promotions are made on the score of merit alone and not on the ground of mere seniority. The man who appears to be best fitted for any special work or post should be selected for that work or post without regard being paid as to how he entered the service, or whether he has or has not followed the regular course of promotion. On the other hand, inefficiency—from whatever cause it may arise—should be dealt with far more drastically than was often the case during my service in India.

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72,660. (Chairman.) The witness was President of Coopers Hill from 1899 to 1906, and was now a member of the Selection Committee for the Public Works Department and the Engineering branch of the Railway Department.

72,661. The selection of men for engineering appointments was made on a variety of qualifications, but as he had said in his written statement, it was quite unnecessary that the whole or even a large proportion of the recruits should hold very high academic distinctions. Every assistant engineer ought to have a certain amount of technical training, but he should not attach particular importance to First-class Honours. There had been a tendency rather to look upon a man who had taken First-class Honours as necessarily a very much better man than a man who had simply taken a pass degree, but his experience had shown him that in very many cases the honours man was more or less of a bookworm and often not quite so good at practical work. In selecting candidates he accepted any pass degree as a suitable qualification. If a man was undoubtedly better in other respects, he attached a certain amount of importance to an Honours Degree, as it showed that he was a good man all round, but he would not pit an Honours Degree against other qualifications.

72,662. On the whole he thought the Coopers Hill training, all round, was better than anything in existence now. Comparing the present system of selection with pure examination, he thought the system of selection was the better of the two, because a great many men who were good on paper in an examination utterly failed afterwards. Some of the very best men in India had been Stanley men, but some very poor specimens had got in by passing an examination. Therefore, he preferred a system of selection of the kind that was now in force. Fairly accurate information was obtained with regard to character and disposition, but he was not altogether satisfied in this respect. For instance, questions were put such as: "Do you consider that the candidate is likely to be able to work satisfactorily with natives of India?" "Is he suited for the business of the Government of India in this Department?" and these questions went to people who knew nothing whatever about India or Indians or the department, and invariably the reply was "Certainly," and such opinions were absolutely worthless. There seemed to be no remedy for that, but he had recently suggested that the questions might be re-cast. The best remedy he could suggest would be a definite probation of three years, and if a man was good he had nothing to fear. If he was not a good man the sooner he left the Service the better. He did not think such a rule would keep a man out of the Service as there was such enormous competition in England at the present moment in the engineering branch that there would be no difficulty in obtaining men. He regarded probation as essential.

72,663. On the Selection Committee there was no one with any recent experience of India, but the constitution of the Committee was a matter for the decision of the Secretary of State. It would probably assist the Committee in their work if a senior officer of the Service was on it, but it would be necessary to be very careful in selecting the officer.

72,664. Plane table surveying was taught in some of the engineering colleges, but he had had many candidates before him who had never used a plane table and knew nothing at all about river discharges.

72,665. There was one matter which was really very important for India. A young engineer went out to the country and found he had to do everything from the start. If he had to build, he had to find in many cases his brick-earth and had to make bricks, learn to burn lime, and do many things which were quite new to him. In England he would go to a contractor and buy everything ready made, but in India he had the preparation of the materials as well as the building. That was a thing that was taught at Coopers Hill as far as possible, but nothing of the kind was now taught in any of the colleges. At present the training in the colleges was more or less a mathematical training and not a practical training. That training had to be picked up gradually, and could hardly be

picked up anywhere else than in India, but students might be given in the course of their training some foundation on which to work.

72,666. He would like to see Indians recruited to the service in India. He objected to sending Indians to England to be trained, because he thought it was a very cruel thing to do. He would have Indian officers in future appointed by selection in India, and even where there was an Indian who had been trained in England—and he did not think any Indian should be trained in England—the Secretary of State should send out particulars to India, and the selection should be made in that country.

72,667. With regard to the observation in the written statement, that at the end of his studies the Indian assistant engineer had about a one in ten chance of being selected, as there were only some two or three appointments annually available for some 20 or 30 applicants, he did not mean that there was a considerable number of Indians in England who were qualified to occupy positions as assistant engineers. They had their diplomas, but he did not think they had the other qualities, and there was no means of testing them. In many cases they were not the right stamp of men for the engineering profession. On the last occasion there were about 30 Indian candidates who had gone through courses in England, costing their parents from Rs. 12,000 to Rs. 15,000, money which might have been borrowed. Yet there could not possibly be more than one in ten who could get an appointment under the present system. He believed that 21 out of the 31 applicants had diplomas. They were all at the colleges, but some had not qualified, and there were only three appointments for the 21 candidates who actually held diplomas.

72,668. A diploma was no test of whether a man was fitted to be an engineer or not. There were points of character infinitely more important than any amount of technical education. On the technical side he did not consider that the diploma represented a sufficient qualification for the ordinary work of the Public Works Department. He would rather insist on practical experience than on technical training if it was necessary to choose between the two. Of course, for certain purposes it was necessary that a man should have high mathematical qualifications, but for the ordinary work of the Department such qualifications were absolutely not required.

72,669. It had been the rule of the selection committee to give preference to men who had had a year or more of practical experience. He was very doubtful about this so-called practical experience, because it was really not practical experience. A man would come forward and say he had been engaged on such-and-such works, and would give a list which would lead one to suppose that he had been actually engaged on the works, but when cross-examined on the subject it would be found that he had simply been to look at them. There were many cases where men had actually been employed and were good enough to be paid for their work, but in a very large number of cases that was not the case, the so-called practical experience simply amounting to the preparation of tracings in the drawing office. The difficulty was that a man who was going out to India paid a premium of 50 to 100 guineas for a year's training, and the people in charge of the works naturally had very little interest in him; they pocketed the premium and did very little in the way of teaching. In the case of Englishmen they often did not charge a premium at all, but took a lot of trouble with them, and during the second or third years they got their money back by making them useful. The men for India were simply lookers-on. A man might have been employed for only six months on works, but if his employer had found him valuable enough to pay for his services, that showed that he was useful. Hitherto the idea had been general that unless a man had a year's practical experience he would not be accepted, but he had had very largely to discard that idea, and therefore he was thrown back on the theoretical qualifications, the candidate's recommendations, and the

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answers the man himself gave during his 10 minutes interview. It would be a good thing to have more than a 10 minutes interview, but it was quite possible in many cases after that time to say that a man was suitable. The rule guiding him was to put himself into the place of an employer and ask himself whether he would take the man on.

72,670. The material for selection was nothing like so strong as it looked on paper. There were a great many men who could be thrown out almost at sight. He was not opposed to examination after selection. Better practical experience could be obtained by probation in India, and after a man was selected he should go straight out to India to gain that experience, and it would be quite possible to say after three years in India whether the man was fit to be retained or not.

72,671. (Sir Murray Hammick.) It was possible that, owing to the frequent change of superior officers, it might be difficult in two or three years to tell what the real value of a probationer was. No doubt it would be a difficult thing for a superior officer in the Public Works Department to make a selection in India after a three years' trial, and the chances were that unless the man was very bad he would remain in the Department, but the authorities in India would at any rate have had the opportunity of finding out whether a man was or was not suitable, and this would be an improvement on the present system.

72,672. With regard to the colleges in England to which Indians went for training, it could not be said that there was any special college. Of those that appeared before the Committee this year five came from Edinburgh, four each from University College and the City and Guilds Institute, three from Glasgow and one each from Armstrong College, King's College, Cambridge, Manchester, and Liverpool.

72,673. When he found that the training had been really practical he placed great value upon it; in other cases the value he attached to it was very small.

72,674. (Sir Valentine Chirol.) He did not think that there was any need for a redistribution of the work done by members of the Public Works Department when they got out to India. Young engineers, whether assistants or executives, in the majority of cases did not require high mathematical qualifications. What he had in his mind was the fact that a good many men of very high qualifications had proved absolutely useless in practical work. He knew many men of his own time, Royal Engineers, Stanley engineers and Coopers Hill men, who were head and shoulders, from the mathematical point of view, above their compeers and yet were absolutely useless for practical work. That seemed rather to show that much of the work which engineers were put to when they first reached India was not the work on account of which they were recruited; they were chosen to do a very much higher class of work and when they got to India they were put to work of a very different character, and when the time came for them to take on first-class mathematical work they had lost to some extent the power of doing it. He did not think that could be remedied by any redistribution of the work done by the Department in India, because not only high mathematical qualifications in certain instances were required but experience to use those qualifications, and that could be only obtained on work. The young engineer might be used as an assistant, to an officer on a big design, but at first he could only carry out the orders of somebody else. He was afraid it was impossible to relieve the engineer of the prolonged burden of so-called inferior work during the first few years, because there were very few higher posts, and they required experience, and in the meantime all the work of the Department had to be done by people who could do it with very much lower qualifications. The ordinary work which had to be done by the Department was very humdrum work indeed, such as road maintenance and construction and survey work.

72,675. (Mr. Abdur Rahim.) He was not inclined to say that the education of an engineer in England was higher than it was possible to get in India, and so far as the engineering service was concerned it would be possible to recruit from Indian engineering colleges. He did not see any reason why it was neces-

sary to recruit Indians from England at all. The European could not be recruited in India, and he had never come across an Indian who was the equal of the English engineer on the work. He did not say that the Indian engineer could do the work expected of him; what he said was that the education in the Indian colleges was as good as that in the English, but, as he had said over and over again, the education was a very minor consideration. There was no question of race involved. As soon as Indian engineers could be got to do the work as well as Europeans, then by all means they should be employed. Since 1903 Indian engineers had been sent out, and it was for India to say whether they had done their work to the satisfaction of the authorities in India. He was not in a position to say whether Indian engineers trained in Indian colleges did their work as well as Indian engineers trained in English colleges. The only persons capable of giving an opinion on this point must be those on the spot who could make the comparison.

72,676. With regard to the statement in his memorandum that "in order to induce the young men to take service in India, it is thought proper to offer them a commencing salary of Rs. 4,560, and we offer the same salary to young Indians, some of whose parents, to my knowledge, cannot be drawing half that amount after 30 or 40 years' service," he did not mean by that that the young Indian engineer was not to be paid a salary larger than his father had been getting, but he did not think he was the class of man to be put in a position of control over a large number of people, and, therefore, he was not a man to be an assistant engineer. That was not necessarily because his father had been in a subordinate service. When he wrote that paragraph he had in his mind that it was not a satisfactory thing for a man in the position of a subordinate to spend an enormous amount of money on sending his son home to England merely on the chance of getting double the pay that his father was drawing at the end of 30 or 40 years' service. It was not intended in any way to be an offensive statement.

72,677. There had been no Indian member on the Selection Committee.

72,678. (Mr. Fisher.) The number of officers recruited each year varied. In 1912 there were only 19 whilst in 1913 there were 33 vacancies. Some years ago there were as many as 234 applicants for about 30 vacancies, but at present there were about 130 applicants for the same number of vacancies, the number of applicants being on the decline. It was difficult to say what that decrease was due to.*

72,679. The Selection Committee did not make a point of approaching the different engineering schools, and it might be a good plan to send round to each of the colleges in order to get some information about the men on the spot. He did not think it would be practicable to give to each of the principal engineering colleges in England a certain number of places and put the responsibility upon the heads of those colleges to recommend candidates, at the same time asking the colleges to undertake to give instruction in those particular branches of engineering knowledge which were directly applicable to India, such as used to be given at Coopers Hill. One year a large number might come up from one particular college, and in the following year there might not be a single man from that college. The principals were asked to place the men as far as possible in order of merit, but it was very rarely that the Selection Committee took precisely the same view as the principals in regard to the relative merits of candidates.

72,680. If an Indian showed any special bent in any particular direction, it might possibly be useful to bring him over to England for further training. That was reverting to what took place some 40 years ago, when two assistant engineers were sent over for

* The witness subsequently wrote:—It is probably due to the fact that the conditions of selection are now better understood by applicants, because it appeared that of the 234 candidates who applied in 1909 only 103 came before the Committee, the remainder having been ruled out as not fulfilling all the conditions laid down. On the other hand, out of the 136 candidates applying in 1914, no less than 91 came before the Committee. It would, therefore, seem that the number of qualified candidates has not really diminished to any serious extent.

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special training. He would not lay down any definite number to be sent over each year, but leave that to be fixed as men were found to be available.

72,681. It was quite true that while the Indian engineering colleges could give a training in civil engineering as good as could be obtained in England, they might be behind English colleges in mechanical engineering and electrical engineering, but he was not dealing with either of those branches, but simply with civil engineering, such engineering as would be taught at Sibpur College and the Thomason College. For all purposes of the Public Works Department, he thought those Indian colleges gave a better education than was given in England, or certainly as good.

72,682. (Mr. Sly.) The Selection Committee were responsible for the selection of engineers required for Indian railways as well as for the Public Works Department, and as far as possible every man selected for a railway appointment had at least one year's training on a large railway in England, and he believed that in the present year every man had had considerably more, some having two or three years' experience. It would be a good thing if that was made a definite condition of recruitment to the railway service. It was no use sending a man on to a railway unless constructional work was going on. It was difficult to secure facilities in England for candidates, but it should be made somebody's business to see that it was done.

72,683. The Indian Public Works Department compared very favourably with other openings for young engineers in point of attractiveness. It was largely a question of money. At present the Indian Public Works Department attracted a really good standard of engineering students.

72,684. With regard to the 10 per cent. rule, it was laid down that the committee had to select at least 10 per cent. of Indians, and he knew of no rule which

permitted more than 10 per cent. to be selected if qualified candidates were available. The standard of Indian candidates had varied considerably. In the early days the committee had selected three Indians and had reported that had they been Europeans not one of them would have been chosen, but since then the standard had so improved that, so far as technical qualifications were concerned, many men could have been selected had the 10 per cent. rule not been in force and it became increasingly difficult to select the best two or three men. In saying this, he was merely comparing Indians with Indians and not with Europeans. There were certain specific degrees of engineering colleges which were accepted as qualifications, amongst them the qualifications of the Institution of Civil Engineers. Some of the qualifications were very likely to be considerably altered. A Past President of the Institution of Civil Engineers sat on the last Selection Committee and had taken note of several of the cases. In the case for instance of one of the colleges it was said that the degree was accepted with advanced mathematics, but when he came to cross-examine on the matter he found there was no examination in mathematics at all, and that the student had merely attended certain mathematical lectures; whether he had benefited from them at all there was nothing to show.

72,685. He doubted very much whether a great deal of work which formerly used to be done by assistant engineers had now been transferred to the Provincial Service and that assistant engineers had now to discharge much higher duties than used to be the case.

72,686-75,143. (Lord Ronaldshay.) The Selection Committee had nothing to do with telegraph engineers. He had been told that mechanical engineering and electrical engineering were better taught in this country than in India, but he had no knowledge on the subject.

(The witness withdrew).

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- I. Note by Mr. R. P. Russell, Secretary to the Government of India in the Public Works Department, relating to the percentage of officers appointed to the Public Works Department in England and from the Engineering College at Rurki, who have risen to administrative rank...
- II. Note by Lala Wazir Chand Chopra relating to the percentage of officers appointed to the Public Works Department in England and in India, who have risen to administrative rank...
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- V. Letter from the Chief Secretary to the Government of the Punjab, No. 1617 (Home-General), dated Lahore, 7th October, 1913...
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- VII. Memorandum prepared by the Government of the United Provinces of Agra and Oudh...
- VIII. Memorandum prepared by the Bengal Government relating to the Public Works Department...
- IX. Memorandum prepared by the Government of Bihar and Orissa relating to the Public Works Department...
- X. Memorandum prepared by the Assam Administration relating to the Public Works Department...
- XI. Note, dated 21st April, 1913, by the Honourable Sir Archdale Earle, K.C.I.E., Chief Commissioner of Assam, on the Public Works Department...
- XII. Memorandum prepared by the Government of Burma relating to the Public Works Department...
- XIII. Memorials submitted by Engineers of the Public Works Department to the Viceroy and to the Secretary of State for India...
- XIV. Memorandum prepared by the Government of Madras relating to the Public Works Department...
- XV. Transfer expenses of Mr. Henry J. M. Cousens...
- XVI. Memorandum prepared by the Government of Bombay relating to the Public Works Department...
- XVII. Memorandum prepared by the Administration of the Central Provinces and Berar relating to the Public Works Department...
- XVIII. Statement, with details by Provinces, of the Civil Appointments on Rs. 200 a month and over held by Europeans, Anglo-Indians, and Indians on the 1st April, 1913, in the Public Works Department...
- XIX. Indian Public Works Department and Indian State Railways—Regulations as to the Appointment of Assistant Engineers, 1914...
- XX. Officials and non-officials who furnished written evidence to the Royal Commission in connection with their enquiry into the Public Works Department, but who were not orally examined...

APPENDIX I.

(Referred to in paragraph 71,285—Mr. R. P. Russell's evidence.)

Note by Mr. R. P. Russell, Secretary to the Government of India in the Public Works Department, relating to the percentage of officers appointed to the Public Works Department in England and from the Engineering College at Rurki, who have risen to Administrative Rank.

1. During my examination on November 17th by the Royal Commission the question was put to me whether it was not a fact that a greater proportion of officers, appointed from the Indian Engineering College, Rurki, had been selected for appointment in the administrative grades, than in the case of officers appointed by the Secretary of State in England—the object of the question I understood was to indicate that the average qualification of officers appointed from the Indian Engineering College was higher than of those appointed in England.

2. I expressed my doubt if an examination of the records would substantiate the assertion.

3. It is obvious that the matter can only be tested by taking the figures for both cases over the same period; it would, for example, lead to a false conclusion if the percentage of all the Engineers from the Engineering College, Rurki, who have risen to administrative rank since, say, 1850, were compared with the percentage of officers who have been appointed in England and have risen to the same rank since 1870.

I attach a statement showing in both cases the number of appointments made from the year 1872—the year in which the first appointments from Coopers Hill were made—to the year 1893 (no officer appointed later than 1893 has yet reached administrative rank) and the number of men in each case of each year who subsequently rose to administrative rank substantively. The result shows that out of a total of 513 officers appointed in England during the 22 years under consideration, 172 or 33·5 per cent. reached administrative rank. Out of a total of 168 officers appointed from Rurki during the same period 38 or 22·6 per cent. reached administrative rank. The assertion made is therefore incorrect and consequently the deduction from it.

PUBLIC WORKS DEPARTMENT (including RAILWAYS).

Year.	Appointments from the Cooper's Hill College.		Appointments from the Rurki College.	
	Number appointed each year.	Number of Officers of each year who reached administrative rank.	Number appointed each year.	Number of Officers of each year who reached administrative rank.
1872	1	1	13	1
1873	6	4	16	6
1874	43	19	22	2
1875	42	16	15	—
1876	38	14	8	5
1877	47	13	8	2
1878	41	15	8	3
1879	42	12	7	3
1880	35	15	*	*
1881	34	11	8	4
1882	29	12	8	2
1883	16	6	8	3
1884	13	7	8	1
1885	13	7	5	2
1886	15	5	5	2
1887	15	2	4	1
1888	14	6	4	—
1889	15	2	4	1
1890	15	3	5	—
1891	15	1	4	—
1892	12	—	3	—
1893	12	1	5	—
Total	513	172	168	38
	33·5 %		22·6 %	

* No recruitment from Rurki in 1880.

APPENDIX II.

(Referred to in paragraph 71,570—Lala Wazir Chand Chopra's evidence.)

Note by Lala Wazir Chand Chopra relating to the percentage of officers appointed to the Public Works Department in England and in India who have risen to administrative rank.

Taking the Government of India lists, which deal with the whole of India, except Railways, Bombay, and Madras, for the last 5 years (I have taken those for June each year), we get the following figures in Administrative ranks:—

Year.	Indian College Engineers.			England-trained Engineers including Royal Engineers.			Grand Total.	Total percentage of Indian College men, i.e., percentage of column 4 over column 8.
	Chief Engineers.	Superintending Engineers.	Total.	Chief Engineers.	Superintending Engineers.	Total.		
1	2	3	4	5	6	7	8	9
June, 1909 ...	5	18	23	9	41	50	73	32
June, 1910 ...	4	19	23	9	38	47	70	33
June, 1911 ...	4	18	22	8	38	46	68	33
June, 1912 ...	3	19	22	10	41	51	73	30
June, 1913 ...	3	17	20	12	42	54	74	27
Average Percentage.								31

The corresponding recruitment can be taken by striking the average of the 3 years 1888-1890. This will give an average difference of 22 years; which is the average length of service for Administrative ranks. The figures are as follows:—

Year.	Men recruited in India.	Men recruited in England including Royal Engineers.	Total.	Percentage of Indian recruits over the total, i.e., of column 2 over column 4.	REMARKS.
1	2	3	4	5	6
1888	2	9	11	18	The recruitment is taken only in those Branches and Provinces which are at present included in the Government of India list to make the comparison with years 1909-1913 correct.
1889	7	12	19	37	
1890	4	11	15	27	
Average percentage.				27	

Thus although the average percentage of recruitment of Indian College men was about 27, their percentage in Administrative ranks is 31. At the time of the last Public Service Commission the general percentage of Indian recruitment was 30, and 31 is better than that even. The present day percentage of Indian recruitment is still lower, namely, about 20. Since this Administrative rank percentage of 31 is better than all the percentages of recruitment, I draw the inference that the percentage in Administrative ranks of Indian College Engineers is better than the proportion of their respective recruitments.

APPENDIX III.

(Referred to in paragraph 71,667—Mr. F. M. Purves' evidence.)

Conditions of Temporary Employment in the Public Works Department with form of Declaration for Temporary Engineers.

A. Conditions of Temporary Employment in the Public Works Department.

(For temporary employes on pay higher than Rs. 250 per mensem engaged for a particular work or for those whose appointments have been sanctioned by the Government of India.)

I.—Persons engaged temporarily will be on the footing of monthly servants, and their employment carries with it absolutely no claim to pension, or to any absentee allowances beyond those conditionally given to temporary employes under Articles 201 (Note), 242 (a), 336 (Rule 1) and 339 (Rule 2) of the Civil Service Regulations.

II.—The services of such employes may be dispensed with at any time without notice in case of serious misconduct on their part—and otherwise after one month's notice, or on payment of one month's salary in lieu of notice. Also with or without notice their engagement will cease absolutely on the completion of the work in connection with which their appointments may have been sanctioned by either the Government of India or the Local Government. Should they desire to resign their appointments they will be required to give a month's notice of their intention to do so or to forfeit a month's salary in lieu of such notice.

Extract from the Public Works Department Code and from the Civil Service Regulations.

Public Works Department Code (Ninth Edition), Chapter I, para. 111, Rule IV.

Rule IV.—Persons engaged locally will be on the footing of monthly servants, and they must be clearly informed in writing that their employment carries with it absolutely no claim to pension or to any absentee allowances beyond those conditionally given to temporary employes under Article 201 (Note) 242, 336 (Rule 1) and 339 (Rule 2) of the Civil Service Regulations, and they must be required to sign a declaration that this is clearly understood by them. As soon as they have joined their appointments, the fact should be reported to the Government of India, in order that the transaction may be reported to the Secretary of State, vide clause (1), Rule III, para. 361. If they are engaged for a special work, their engagement lasts only for the period during which the work lasts. If dismissed otherwise than for serious misconduct before the completion of the work, they will be entitled to a month's notice or pay in lieu of notice; but otherwise, with or without notice, their engagement terminates when the work ends. If they desire to resign their appointments they will be required to give a month's notice of their intention

APPENDIX III—continued.

to do so or forfeit a month's pay in lieu of such notice.

The terms of engagement should be clearly explained to men employed under the circumstances mentioned in this order.

Article 201. Note.—[The rules providing for the grant of leave to an officer who has a temporary or officiating appointment only are contained in Articles 242, 336, Rule 1, and 339 of Rule 2.]

Article 242 (a).—An officer, who has a temporary or officiating appointment only may be allowed Privilege leave, without losing his lien on such appointment, if no substitute is required, or if his duties can be provided for without additional expense.

Article 336.—Leave on Medical Certificate may be granted for three years in all, but not for more than two years at one time; and no officer can have leave on Medical Certificate out of India more than twice.

1.—An officer who has a temporary or officiating appointment only may be allowed leave under this Article for not more than three months, if no substitute is required, or if his duties can be provided for without additional expense.

Article 339.—Extraordinary leave without allowances, may, in case of necessity, and when no other

leave is by Rule admissible, be granted for such time as may be necessary. Time spent on leave under this Article does not count as service for other leave. Subject to the provisions of Article 198, there is no limit to the length or frequency of leave under this Article. It may not be granted in combination with the grant of other leave except as provided in Article 233. But it may be granted in continuation of other leave if circumstances arise which prevent the return by the officer to duty, and which, in the opinion of the Local Government or the authority empowered to grant the leave, are such as to justify the concession. No officer is entitled to Extraordinary leave.

2.—An officer who has a temporary or officiating appointment only may, at the discretion of the Local Government or the head of the officer's office, be allowed leave under this Article for not more than three months.

B. Form of Declaration for Temporary Engineers. —I do hereby declare that I have been made acquainted with the conditions prescribed for temporary employes in the Public Works Department, as laid down in Chapter I, para. 111, Rule IV, of the Public Works Code (Ninth Edition); that these terms are clearly understood by me, and that I am willing to accept employment under them.

APPENDIX IV.

(Referred to in paragraphs 71,667-68—Mr. F. M. Purves' evidence.)

Memorials of certain Temporary Engineers and connected correspondence, as follows:—(I) To His Honour the Lieutenant-Governor of the Punjab; (II) To His Excellency the Viceroy, enclosing Memorial to His Honour the Lieutenant-Governor of the Punjab, with reply; (III) Connected Correspondence.

(I) To His Honour
The Honourable SIR MICHAEL FRANCIS O'DWYER,
K.C.S.I., I.C.S.,
Lieutenant-Governor of the Punjab and its
Dependencies.

The humble Memorial of
Temporary Engineer, Irrigation Branch, Public
Works Department, Punjab.

Dated the 1913.

Sheweth
That Your Memorialist is employed as a Temporary Engineer in the Irrigation Branch of the Public Works Department in the Punjab.

That he has served the Government faithfully and to the best of his ability since he was appointed.

2. That up to June 1908 the last sentence of sub-para. 1 of para. 111 of the Public Works Department Code, Volume I, 1907, fixed the salaries of all Temporary Engineers at a maximum of Rs. 950 per mensem. That in 1908 that paragraph was cancelled, and that such cancellation led to the natural belief that the maximum salary of a Temporary Engineer would not be, in the future, restricted. That there are several Temporary Engineers all over India, with salaries ranging from Rs. 750 to Rs. 1,250 per mensem.

3 That Your Memorialist has only lately been informed of the contents of letter No. 1700 E., dated 20th December, 1911, from Secretary to the Government of India, to Secretary to Government, Punjab. That the above quoted letter limits the increments which may be earned by Temporary Engineers to Rs. 50 per mensem after two years of approved service; and his salary to a maximum of Rs. 700 per mensem.

4. That Your Memorialist most respectfully submits that a decision so momentous to Your Memorialist's future prospects and position, and so much at variance with Your Honour's well known equity, should not, in justice, have been kept from Your Petitioner's knowledge for nearly nineteen months.

5. That Your Memorialist is forced to conclude that such stringent restrictions of Your Petitioner's prospects were ordered, without due consideration of the conditions of Your Memorialist's service, and Your Memorialist's just expectations.

6. That Your Memorialist's conditions of service are briefly as follows:—

(a) Liability to dismissal with one month's notice without cause assigned.

(b) Absence of all title to pension or gratuity.

(c) Dependence of increments to salaries and retention of service entirely on the reports of the immediate superior, appreciation by the recommending authority, and, finally, approval of the same by the Local Government and Government of India.

(d) A higher quality of work expected than that demanded of Permanent Engineers in spite of mental strain consequent on disabilities (a), (b) and (c).

7. That by the Re-organisation of 1908 and the subsequent Resolution of Government, the prospects of all classes of Permanent Engineers were enhanced.

8 That when the emoluments of the Permanent Establishment of the Public Works Department were increased, Your Memorialist was filled with great hope that Your Honour's Government would forthwith proceed to enquire into the case of the establishment of Temporary Engineers, and that their disabilities would be ameliorated. That, therefore, Your Memorialist is unable to grasp the reason if any, why Your Memorialist's just expectations of similar treatment have been nullified, and Your Petitioner's prospects thus curtailed.

9. That the attitude of the Government, as indicated by the letter of the Secretary to the Government of India, in the Public Works Department, quoted above, has shattered every hope of advancement. That Your Memorialist, suffering under a sense of uniformly unsympathetic treatment, will be slowly but surely crushed beneath the weight of burdens imposed by the Government, Your Memorialist has served with such ability as has, to Your Memorialist, been given.

10. That, considering all the indications which have from time to time been revealed by the Government of unsympathetic treatment meted out to Temporary Engineers, Your Memorialist may be pardoned in arriving at the conclusion that Your Memorialist's position is gradually becoming more and more untenable. That Your Memorialist may be further pardoned for humbly submitting that such treatment is foreign to the whole tenour of that justice which is the treasured tradition of a Great Government.

11. That Your Memorialist humbly and respectfully prays that Your Honour will be pleased to forward this Memorial to His Excellency the Viceroy, and to recommend the following reliefs, viz.:—

(i) The withdrawal of the order fixing the maximum pay of Temporary Engineers at Rs. 700 per mensem, and increments at fifty rupees every second year, and

(ii) Sanction to Your Memorialist remaining eligible for such increases of salary for which Your Memorialist may from time to time be recommended, and this on some recognised basis.

And Your Memorialist will ever pray, &c.

(II) To His Excellency
The Right Honourable CHARLES
BARON HARDINGE OF PENSHURST,
G.M.S.I., G.M.I.E., K.C.B., etc.,
Viceroy and Governor-General of India
in Council.

(Through proper channel).

The humble Memorial of
Engineer, Irrigation Branch, Public Works
Department, Punjab.

Dated the 1913.

Sheweth:—

That Your Memorialist is employed as a Temporary Engineer in the Irrigation Branch of the Public Works Department in the Punjab.

That he has served the Government faithfully and to the best of his ability since he was appointed.

2. That in November, 1912, Your Memorialist submitted a Memorial to His Honour Sir Louis William Dane, then Lieutenant-Governor of the Punjab, setting forth his grievances and praying that a recommendation be made to competent authority, for such relief as might seem just and proper in the circumstances.

3. That the reply received from His Honour the Lieutenant-Governor—a copy of which, together with copy of original Memorial, is attached as Appendices (B) and (A) is so extremely unsympathetic and disappointing, not to say disheartening, that Your Excellency's Memorialist is constrained to appeal to Your Excellency's acknowledged sympathy, for a consideration of Your Memorialist's grievances.

4. That His Honour's reply to paras. (1), (2), and (6) of Your Memorialist's original Memorial does not appear to recognise the fact that the establishment of Temporary Engineers has steadily increased from its inception in 1891; showing that the tenure of office has been accepted by all concerned as practically permanent; and that Temporary Engineers are in no sense of the word the casual employees for which the rules in the Civil Service Regulations were designed, and subject to which they have to work.

That, if it had been the intention of Government merely to employ men to suit requirements, Your Memorialist humbly submits that it would have been fairer to have dispensed with their services after three, four or five years and to have engaged others. That there would then have been no mistake as to the intentions of Government, and it would have become evident that men of the class needed would not have been obtainable at the salaries accepted, in the just hope of good prospects. That by retaining their services for ten, fifteen and twenty years Your Memorialist submits what Your Memorialist ventures to

think Your Excellency's justice will allow, that such men have earned a lien on their appointments, and that Government is thereby under a moral obligation to provide for their futures (they being trained specialists and unable to gain suitable employment outside Government service); and to secure them and those dependent on them from penurious want.

That no allusion was made to State Railway Engineers by Your Memorialist, who distinctly referred to "all other non-pensionable public officers employed on State Railways." That there would appear to be no reason why a body of highly specialized officers should be obliged to labour under less favourable conditions than non-pensionable public officers of State Railways.

5. That prayer (6) has received no reply whatever, that being combined with prayers (1) and (3), it has escaped consideration. That Temporary Engineers on all open lines of Railways are admitted to special provident rules, along with all other non-pensionable establishment. And Your Memorialist fails to understand why a Department which yields considerably better results than State Railways should be unable to treat the very employees, who contribute so largely to such results, with equal liberality as the Railway Department.

6. That judging, by His Honour's reply to prayer (2), the purport of Your Memorialist's prayer would seem to have been entirely misunderstood.

That Your Memorialist did not intend to ask for the frequency of selection to the permanent establishment to be regulated; but that such transfers might be more frequent than at present, and that selection be governed by some recognised principle. That the Temporary Engineers as a body, in view of their wide experience and services, be constituted one of the sources, if not the main source, of recruitment to the Irrigation Branch of the Public Works Department after a period of approved service.

7. That His Honour's reply to prayer (4) is the first intimation of any order of the Government of India limiting Your Memorialist's increments to Rs. 50 every second year, and that the omission to inform Your Memorialist of an order, fraught with so much importance to Your Memorialist, is a typical instance of the scant consideration meted out to a body of men, deserving well of the Government. That such an order is exceedingly disheartening to Your Memorialist, who has been led to believe that good work would always be suitably rewarded. That the order is all the more depressing from a consideration of the fact that Permanent Engineers get annual increments of Rs. 35 and 50, respectively, after 8 years' service.

That Your Memorialist begs to submit that Temporary Engineers performing the same duties, under far less favourable conditions, with no guarantee of continuous employment, or of provision in the future, in the shape of either pension or adequate provident provision, are entitled to at least an equal, if not better, rate of increment than their permanent confrères.

8. That Your Memorialist has waited patiently for five years since hearing of the improvement in the prospects of the permanent establishment, for some amelioration of the conditions of Your Memorialist's service before appealing to Your Excellency; and humbly submits that this should be accounted unto Your Memorialist for righteousness.

9. That Your Memorialist accordingly humbly and respectfully prays that Your Excellency will be pleased to take this and the earlier Memorial into your favourable consideration and grant the following reliefs, namely:—

(1) That Temporary Engineers of over four years' standing be made permanent, non-pensionable, and be borne on the same cadre as the Permanent Engineers, who are pensionable and promoted side by side with them in due and ordinary course.

(2) That the selection of Temporary Engineers for appointment to the pensionable list may be regulated in such manner as may be just and suitable, and that

such selections may be more frequently made than at present, and on some recognised basis.

(3) That Temporary Engineers be treated in all respects in the same manner as all other non-pensionable public officers employed on the State Railways in India.

(4) That their increments may be made annual and on a more liberal scale than at present, and that such increments may be regulated by fixed rules as in the case of the pensionable staff of Engineers.

(5) That they may be granted the language rewards and allowances granted to their confrères on the pensionable list.

(6) That their Provident Fund be placed on the same basis as those of State Railways; and

(7) That the leave rules applicable to all other Indian services be extended to them.

(8) That Your Memorialist's request for permanency be specially considered.

Or such other or further relief as to Your Excellency may seem just and proper in the circumstances.

And Your Memorialist will ever pray, &c.,

ENCLOSURES IN ABOVE.

(A.) To His Honour
The Honourable Sir Louis William Dane,
G.C.I.E., C.S.I., I.C.S.,
Lieutenant-Governor of the Punjab.

The humble Memorial of
Temporary Engineer, Irrigation Branch, Public
Works Department, Punjab.

Dated the 18th November 1912.

Sheweth—

That your Memorialist is employed as a Temporary Engineer in the Irrigation Branch of the Public Works Department in the Punjab.

That he has served the Government faithfully and to the best of his ability since he was appointed.

2. That, while the rules applicable to temporary Engineers debar them from many rights, advantages and privileges which are allowed to the permanent service, whether Imperial or Provincial, your Memorialist believes that it will be generally admitted that they form a useful body of public servants and have, for many years, as a body, rendered valuable services to the State. That, in this view, your Memorialist ventures to approach Your Honour in the hope of obtaining the redress of some of what he humbly ventures to regard as his grievances and, generally, an improvement in his position and prospects.

3. That, in order to make his case clear, your Memorialist begs to explain that Temporary Engineers were first employed, in the Punjab, in 1891, for work on the Lower Chenab Canal and the Sirsa Branch of the Western Jumna Canal: That this became necessary because of the reduction of the staff of Engineers in the Public Works Department, brought about by facilitating retirements in order to relieve a block in the service, with the result that the numbers soon became too low to meet the requirements of the works to be executed: That, in the course of the years 1891-98, a considerable number of Temporary Engineers were engaged and an effort was at first made by the Government to obtain the services of purely Temporary Engineers on a higher rate of salaries than that prevailing in the lower grades of the regular service. That this effort having failed, attention was turned to recruiting Temporary Engineers from amongst young, newly-qualified persons, with the intention of training and specialising them and employing them continuously without involving liabilities in respect of pensions. That officers thus specialising as Canal Engineers can only look to the Government, which has had them trained, for future employment and, if their services are dispensed with, find it impossible to obtain suitable employment elsewhere.

4. That there are now fifty-six Temporary Engineers in the Irrigation Branch of the Public Works Department of the Punjab, of whom—
22 have five years' service or less;
21 have more than five and less than ten years' service;

8 have more than ten and less than fifteen years' service, and
4 have more than fifteen years' service;
1 has more than twenty-one years' service.

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That these officers, some of whom have served for many years, are allowed no rank or grade promotion even when they hold Divisional charges.

That the above Temporary Engineers are, in addition to three covenanted Engineers, employed in the Amritsar Workshops and six Temporary Engineers employed in the Roads and Buildings Branch.

That there are employed in the Irrigation Branch of the Public Works Department of the Punjab, 42 Assistant Engineers on the Imperial List and 14 Assistant Engineers on the Provincial List, so that the body of Temporary Engineers, who are all substantively Assistant Engineers, is more than four times the number of Assistants in the Provincial List, 26 per cent. more than the number of Imperial Assistants, and more than 50 per cent. of all the Assistant Engineers employed in the whole of the Irrigation Branch of the Province. That these facts make it clear that this large body now consists of Engineers practically in permanent employ, but placed on a separate list from the permanent Engineers, the chief distinction between the two lists being that the so-called Temporary Engineers are not entitled to pension.

5. That it is humbly urged that these figures show that the Government policy has long since changed from that which originally led to a few Engineers being temporarily engaged from time to time to meet emergencies and for special works and that the so-called Temporary Engineers now really form a large and integral part of the permanent staff, though engaged on altogether different terms, and are employed regularly on every class of work: That the Engineers so employed now constitute a regular service of Engineers, who, though still called "Temporary Engineers," are engaged on less favourable terms, in almost every respect, than those accorded to the permanent service. That Temporary Engineers discharge precisely the same duties as the latter, and many are compelled to submit to the humiliation of serving under their juniors in age, experience or length of service. That the engagement of Temporary Engineers is renewed annually and they are liable to dismissal after one month's notice, however long they may have served.

6. That it is humbly urged that the list of the so-called Temporary Engineers contains men who are in no way inferior in educational and professional qualifications to the men on the permanent list: That most officers recruited as Temporary Engineers hoped and believed that, if they gave satisfaction, they would, after some period of probation, be placed on the list of the permanent service. That this hope has been encouraged by appointments actually made from time to time to the permanent list:

That the following Temporary Engineers have been so advanced:—

Date of appointment to Permanent Service.	Name.	Present Rank.	Date at first appointment as Temporary Engineer.
1905 ...	C. J. Floyd ..	Officiating Superintending Engineer.	May, 1891.
1898 ...	C. B. Williams	" "	June, 1891.
" ...	F. T. Bates...	" "	September, 1892.
" ...	J. N. Taylor	Executive Engineer	May, 1891.
1905 ...	E. H. Purves	" "	January, 1893.
1898 ...	E. R. Foy ...	" "	December, 1891.
1905 ...	C. B. Mellor	" "	May, 1892.
" ...	A. E. Jeffries	" "	February, 1891.
" ...	W. C. W. Muller.	" "	May, 1894.
" ...	R. C. R. Wilson.	" "	September, 1898.
" ...	C. H. A. Muller.	" "	May, 1895.

That in 1898 there were 32 Temporary Engineers and only 5 were made permanent, and in 1905 there were 50 such Engineers of whom only 7 were made permanent.

That fourteen Engineers were engaged, for fixed terms, in Europe, under covenants. That, of these eight men were, on the expiry of their respective terms, transferred to the Permanent List, while two others remained on the Temporary List. That the others retired at the end of their terms. That the transfer of these eight Temporary Engineers to the Permanent List over the heads of the Temporary Engineers engaged in India, who were senior to them, was regarded as a grievous hardship. That there were, on the Temporary List at least thirteen officers of longer service than these eight officers.

7. That the policy of the Government appears to have been to use Temporary Engineers for the purpose of graduating or regulating the flow of promotion in the permanent service, and that their services and interests, and the hardships thus imposed upon them, have been entirely overlooked. That, as a body of useful and hardworking public servants, discharging the same duties as their brethren on the Permanent List, and, in fact, themselves continuously employed, they feel this treatment very acutely indeed.

8. That by retaining so-called Temporary Engineers continuously in the service for many years, and gradually increasing their numbers, until they now form a very important proportion of the entire Engineering Establishment, it is humbly submitted that the Government have broken away from the original principle of engaging such Engineers for purely temporary service, and your Memorialists humbly contends that hopes have thus been raised which ought, in justice, to be fulfilled and urges that the Government should meet the just expectations of the present body of Temporary Engineers, who have done good work for so many years that their prospects are bound up in the Government service. That the discontent which has arisen amongst this useful body of public servants, cannot, it is submitted, be deemed unnatural when the disadvantages under which they (as practically forming a permanent service) labour as compared with their brethren on the Permanent List.

9. That the permanent services of the Public Works Department have recently been re-organized and the position and prospects of the members of those services have been greatly improved, while nothing has been done to mitigate the hardships of the class of Temporary Engineers. That your Memorialists, therefore, humbly and respectfully, solicits that the hardships under which his service suffers and the grievances under which he himself labours may be mitigated and relieved.

10. That, in the matter of appointment to the permanent staff, two sets of selections have hitherto been made. That in the first case selection was made only from those Temporary Engineers who were at the time employed on a single canal: That this told hardly on the general body of Temporary Engineers: That such promotion should, in justice, have been made by seniority tempered by selection from amongst the whole body of such Engineers. That the second set of selections was made from different canals, it is true, but seniority was more or less ignored, even in the case of seniors holding professional and service qualifications equal, if not superior, to some of the juniors who were selected: That, moreover, not a single Indian was selected for appointment to the permanent service although several were senior and equally qualified: That the list given in paragraph six, will make this clear. That it is humbly submitted that the selections have been few in number and have not been made on any recognized and sound principle: That five officers of over fifteen years' service, of acknowledged ability and good conduct, have been left out. That, out of the Temporary Engineers, of between five and ten years' service, there are several who would undoubtedly receive promotion in any other department of the service of Government. That it is impossible to expect officers of unquestioned character and ability, having several years of approved service and a good record behind them, to be contented under the conditions at present applicable to the Temporary Engineers in the Punjab. That it is respectfully urged that it is to the interests of the Government to ameliorate their

condition and to render them contented and, therefore, more useful public servants.

11. That it cannot be advantageous to the Government to constitute a class of public servants which is looked upon by the members of another class of such servants, as being of inferior status, and the members of which are treated as having no right to consideration in matters of rank, promotion and the like. That many high officers of the Department have expressed the opinion that the present state of things, under which the same work is done by officers recruited on two different sets of conditions, those recruited on one set being placed on a lower status as regards permanency of employment, promotion and other privileges, and being regarded with supercilious contempt by their confrères who were recruited on another set of conditions giving them a more assured and favourable position, is not satisfactory. That, whatever else may be said, Temporary Engineers, as already shown, now form an integral part, and a large proportion of the Engineering Establishment of the Punjab.

12. That the chief grievances which your Memorialists desires to put forward may be briefly stated as follows:—

- (a) Uncertainty of tenure of office and consequently mental anxiety.
- (b) Insufficient prospects and uncertainty and inequality in increase of salary.
- (c) Inability, with reference to (a) and (b), to make provision for the future.
- (d) The withholding of jungle and other allowances.
- (e) The absence of any definite leave rules.
- (f) The insufficiency of the Provident provision in lieu of pension.
- (g) The exclusion of Temporary Engineers from any right to hold Divisional charges and the absence of allowances to Temporary Engineers drawing Rs. 600 or over, when holding such charges.

That, while a large proportion of the officers employed on State Railways are non-pensionable, no such distinctions and disabilities apply to them as apply to the Temporary Engineers.

13. That a reference to the Civil List alone shows that Temporary Engineers are not treated with any consideration, and are herded together in a list appended to the list of the pensionable service without regard to grade, rank or service: That this may seem a small matter but for the fact that it is typical of the attitude taken up towards a large body of professional men.

14. That, as regards insecurity of tenure of appointment, your Memorialist ventures to think that the word "temporary" can no longer be aptly applied to men who, if found to be efficient, are retained in the service as continuously as any other class of public servants, some of whom are also (as in the Railways) non-pensionable: That, at the same time, the retention of this denomination leads to the treatment of Temporary Engineers with less consideration on the supposition that they can be more easily got rid of than any other class of public servants. That every Temporary Engineer is continually made to feel the insecurity of his position, and this, in the course of time, preys upon his mind and affects his nerves and renders him less confident and useful as a public servant, besides embittering his life. That, so long as the door of appointment to the Permanent List is open to Temporary Engineers and they are appointed to it within four or five years of their first appointment, the early period of the service being regarded as probational, no evil effects follow; but, when that door is closed for ten, fifteen, twenty or more years, the effect is highly injurious to the public service. That the Civil Service Regulations themselves show that the principle of assuring a permanent tenure of office, during good behaviour and efficient service, is generally admitted, and is, indeed, regarded as of supreme importance, and this principle is, in fact, applied to all services, superior and inferior alike, except in the case of Temporary Engineers.

15. That at present the fact that a Temporary Engineer can be dismissed with a month's notice, without any cause being assigned, is often used as a means of depriving him of the right allowed to all other Government servants of being permitted to reply to any charges of incompetence or misconduct which may

be made against him. That the exclusion of Temporary Engineers from these rights and privileges is not based on any condition of their employment, and is a right possessed by every public servant, whether permanent or temporary. That your Memorialist believes that it has never been the intention of Government to deny this privilege to Temporary Engineers, who belong to a professional class and are discharging the duties of, and are themselves, *Gazetted Officers*.

16. That your Memorialist ventures to urge that Temporary Engineers, although non-pensionable, are entitled to be placed on the regular cadre, and that this should be recognised and their status re-organised accordingly: That your Memorialist accordingly solicits that after four, or, at most, five years' approved service, a non-pensionable Engineer should be placed on the same cadre as the pensionable staff and be promoted side by side with that staff to Divisional charges, and that all disqualifications, except that of pension, be eliminated: That your Memorialist further solicits that the door of the pensionable service should be more widely opened to deserving members of the temporary establishment according to some recognised and definite rule.

17. That the Temporary Engineers are employed from year to year, subject to one month's notice of dismissal. That notice of their retention is annually served on them and has become almost a mere matter of form, but the existence of the rule and of this annual reminder thereof is extremely disheartening, not to say demoralising, as warning the recipient that his tenure of office is exceedingly insecure, and that, at any moment, he may, with those depending on him, be cast adrift, whatever may be the length of his service. That no employer imposes such a condition on his superior servants as that imposed upon Temporary Engineers, namely, that their services may be dispensed with one month's notice. That persons employed from year to year in the United Kingdom are in all cases entitled to a quarter's or longer notice: That private employers in India usually allow from three to six months' notice to superior employees. That what has been stated above shows the very great insecurity of the position of Temporary Engineers, and the state of mind engendered thereby is more easily imagined than described.

18. That the State Railways freely use the system of employing officers on the principle that the men employed shall not be entitled to pension: That, on Railways, those employed subject to this condition, are all treated as members of the permanent establishment and are graded, promoted and treated in all other respects in exactly the same manner as pensionable officers: That liberal provident provision, specially designed to meet the deprivation of pension, is established throughout every Railway service: That your Memorialist humbly solicits that precisely the same conditions should be applied to the body of Temporary Engineers: That the provision referred to is that the employer contributes to the provident fund, monthly, a sum practically equal to the contribution made by the servant, thus doubling the provision made.

19. That your Memorialist humbly urges that the body of Temporary Engineers suffers severely from the absence of any settled principle or rule regulating the increase of pay by annual increments. That, in this respect, the Temporary Engineer having no chance, as such, of rising to the position of Superintending or Chief Engineer, should be given increments on a somewhat higher scale than that applicable to the permanent Provincial List of Engineers: That, it is humbly urged that for a certain number of years the annual increments might be fixed at Rs. 40 and thereafter at Rs. 50 per mensem, and that salaries might be allowed to rise to a maximum of Rs. 1,050.

20. That there would, it is respectfully urged, seem to be no good reason for depriving Temporary Engineers of the Jungle allowances made to the permanent services, or of Language rewards, and the grant of these is humbly solicited: That the Jungle allowance is presumably made as compensation for long residence in solitary and inhospitable parts of the country, where the expense and hardship of living are accentuated: That Temporary Engineers are neces-

sarily employed for long periods in such out of the way places, because they spend their service as Sub-Divisional Officers.

21. That your Memorialist humbly submits that there seems to be no good reason why the leave rules applicable to the Indian services generally should be denied to Temporary Engineers, and solicits the extension of these rules to them, in their entirety, inasmuch as they undergo the same strain and discharge the same duties as their confrères of the permanent service: That, at present, Temporary Engineers come under the temporary service rules which are intended for persons employed for short periods only. That such rules are hardly adapted to persons continuously employed for long periods: That, as regards privilege leave, the Temporary Engineer may have to pay the charge allowance given to his *locum tenens*, if a subordinate. That, as regards furlough, a Temporary Engineer has no recognised rights, and it has lately been decided by the Government of India that he may not get more than one year's furlough at a time, whatever his service. That, having regard to the present state of the body of Temporary Engineers, these inadequate provisions as to leave demand consideration.

22. That now that the list of Temporary Engineers has become both large and permanent, and contains the names of several men of over ten years' service, your Memorialist respectfully ventures to urge that such Engineers should be given Divisional Charges according to their seniority with reference to the whole body of Engineers both pensionable and temporary: That this boon would not only put new heart into this branch of the service, but would also be advantageous to the public interests, inasmuch as men of long service are more suited to Executive than Sub-Divisional work, while their experience would render them an acquisition to this grade.

23. That your Memorialist accordingly humbly and respectfully prays that Your Honour will be pleased to take this Memorial into your favourable consideration, and to recommend to competent authority in the sense desired, the grant of the following reliefs, namely:—

(1) That Temporary Engineers of over four years' standing, be made permanent, though non-pensionable, and be borne on the same cadre as the permanent service Engineers, who are pensionable, and promoted side by side with them in due and ordinary course;

(2) That the selection of Temporary Engineers for appointment to the permanent, pensionable list may be regulated in such manner as may be just and suitable, and that such selections may be more frequently made than at present, and on some recognised basis;

(3) That Temporary Engineers be treated in all respects in the same manner as all other non-pensionable public officers employed on the State Railways in India;

(4) That their increments may be made annual and on a more liberal scale than at present, and that such increments may be regulated by fixed rules, as in the case of the pensionable staff of Engineers;

(5) That they may be granted the Jungle and Language allowances granted to their confrères on the pensionable list;

(6) That their Provident Fund may be placed on the same basis as those of State Railways;

(7) That the leave rules applicable to all other Indian services be extended to them; and or such other or further relief as to Your Honour may seem just and proper in the circumstances.

And your Memorialist will ever pray, &c.

(B.) REPLY TO ABOVE.

Copy of a letter from F. E. Gwyther, Esquire, Secretary to Government, Punjab, Public Works Department, Irrigation Branch.

I am directed to acknowledge the receipt of correspondence ending with your letter No. 7493, dated

APPENDIX IV—continued.

27th November 1912, submitting memorials from Temporary Engineers praying:—

(1) That Temporary Engineers of over four years' standing be made permanent non-pensionable, and be borne on the same cadre as the permanent service Engineers, who are pensionable and promoted side by side with them in due and ordinary course.

(2) That the selection of temporary Engineers for appointment to the permanent pensionable list may be regulated in such manner as may be just and suitable, and that such selection may be more frequently made than at present and on some recognised basis.

(3) That temporary Engineers be treated in all respects in the same manner as all other non-pensionable public officers employed on State Railways in India.

(4) That their increments may be made annual and on a more liberal scale than at present, and that such increments may be regulated by fixed rules as in the case of the pensionable staff of Engineers.

(5) That they may be granted the Jungle and Language allowances granted to their confreres on the pensionable list.

(6) That their Provident Fund may be placed on the same basis as those of the State Railways; and

(7) That the leave rules applicable to all other Indian Services may be extended to them.

2. In reply, I am to state that the memorials have been laid before His Honour the Lieutenant-Governor, and to request that the memorialists may be informed as follows:—

Prayers (1), (3), and (6).—As temporary Engineers are engaged to supplement the permanent establishment in order to meet the demand for extra supervision which may arise from time to time, as well as to insure that the Public Works Establishment be capable of contraction as well as of expansion as the expenditure on works diminishes or increases, His Honour is unable to make any recommendations to the Government of India for the appointment of temporary Engineers to the cadre posts as permanent non-pensionable.

It may be pointed out to the memorialists that in the Engineer establishment of State Railways there are but three officers on the permanent non-pensionable establishment.

Prayer (2).—As the selection of temporary Engineers for permanent appointment depends on vacancies caused by the authorized sources of recruitment being unable to supply the demands, the frequency of such selections cannot be regulated.

Prayer (4).—The Government of India have intimated that, unless very special reasons can be advanced, no increment should exceed Rs. 50, and that no increment should be granted except after two years' approved service, and in this His Honour agrees with the Government of India.

Prayer (5).—Language allowances are admissible for Baluchi and Pashtu only, and temporary Engineers are not debarred from drawing these allowances when they fulfil the conditions of the grant.

As regards jungle allowances, the Government of India have been pleased to rule in their Public Works Department letter No. 1436-1449 E., dated the 5th December 1912, that in future local allowances, which are ordinarily admissible to members of the permanent establishment, may be granted, either in whole or in part, to temporary employees under sanction of proper authority and subject to any restrictions which the sanctioning authorities may decide to impose.

Prayer (7).—As temporary Engineers can, with the sanction of the Government of India, be granted leave otherwise than that what is admissible under the Regulations, His Honour is of opinion that no change in the Rules is necessary.

III. CONNECTED CORRESPONDENCE.

(i) *Copy of para 2 of a letter No. 1700 E., dated the 30th September 1911, from Mr. G. H. C. Maistre, Deputy Secretary to the Government of India Public Works Department, to the Secretary to the Government, Punjab, Public Works Department, Irrigation Branch.*

2. In regard to the officers for whom increases of pay are recommended, I am to say that the Government of India are, as a rule, averse to granting an increase of more than Rs. 30, and that only after two years' approved service. It is observed that in some cases increases ranging from Rs. 25 to 50 are proposed after a year's service only and in one case Rs. 100 after two years' service. The Government of India are of opinion that these Temporary Engineers should not, save in very exceptional cases, be given a higher rate of pay than Rs. 700 a month, and that, therefore, it is undesirable to increase their salaries too rapidly. They further consider that unless very special reasons can be advanced no increment should exceed Rs. 50 and that no increment should be granted except after two years' approved service.

This has been superseded by B. (Government of Punjab letter No. 02488 E.I., dated 14th October 1913).

(ii) *Copy of a letter No. 02488 E.I., dated 14th October 1913, from the Secretary to the Government, Punjab, Public Works Department, Irrigation Branch, to the Superintending Engineer, Derajat Circle.*

With reference to correspondence ending with your letter No. 5439, dated 22nd September 1913, submitting certain Memorials addressed to His Honour the Lieutenant-Governor, by Temporary Engineers, praying that a recommendation may be made to the Government of India for the withdrawal of the order fixing the maximum salary of Temporary Engineers at Rs. 700 per mensem and increments Rs. 50 every second year, and that they may remain eligible for such increases of salary as they from time to time be recommended for, and this on some recognised basis, I am directed to request that the Memorialists may be informed that in future the remuneration to be given to Temporary Engineers will be considered on the merits of each case with reference to the financial powers conferred on Local Government by the Government of India Finance Department Resolution No. 249 E.A., dated 15th July 1912, under which Provincial Governments can sanction temporary appointments, the cost of which is wholly or partly provincial, for any specified period if the remuneration exceeds Rs. 800 a month, but does not exceed Rs. 2,500 a month. Temporary appointments, the cost of which is wholly Imperial, may be sanctioned by Provincial Governments for any period if the remuneration does not exceed Rs. 250 a month.

This has been superseded by C. (Government of India letter No. 2208-2, dated Simla, the 24th October 1913).

(iii) *Copy of a letter No. 2208-2, dated Simla, the 24th October 1913, from the Assistant Secretary to the Government of India, Public Works Department, to the Secretary to the Government of Punjab, Public Works Department, Irrigation Branch.*

I am directed to acknowledge the receipt of your letter No. 02378 E.I., dated the 10th October 1913, forwarding Memorials submitted by certain Temporary Engineers employed in the Punjab in which they pray for an improvement in the conditions of their employment and for the grant of certain other concessions in the matter of pay allowances, Provident Fund and Leave.

2. In reply, I am to say that, as the Temporary Engineers will have an opportunity of representing their case to the Royal Commission on Public Services, the Government of India do not propose to consider the Memorials forwarded with your letter till they have received any recommendations which the Commission may have to make on behalf of the general body of such Engineers. I am to request that the Memorialists may be informed accordingly.

APPENDIX V.

APPENDIX V.

Letter from the Chief Secretary to the Government of the Punjab and its Dependencies, No. 1617 (Home—General), dated Lahore, 7th October, 1913.

With reference to your letter dated the 1st of August 1913, I am directed to forward 20 copies of letter No. 567 E. S., dated the 23rd of September 1913, from the Chief Engineer, Public Works Department, Buildings and Roads Branch, and of its enclosure, giving the information required by the Royal Commission in respect of the Buildings and Roads and Irrigation Branches of the Public Works Department, Punjab.

Enclosure in covering letter from Colonel R. S. Maglavan, C.B., C.S.I., Chief Engineer, Punjab, Public Works Department, Buildings and Roads Branch, No. 567 E. S., dated Simla, 23rd September 1913.

PUBLIC WORKS DEPARTMENT, PUNJAB, BUILDINGS AND ROADS AND IRRIGATION BRANCHES.

Statement showing information required by the Royal Commission on the Public Services in India in their Joint Secretary's letter dated the 1st August 1913, to the address of the Chief Secretary to Government, Punjab.

(i) *Present regulations as to recruitment, training and probation, and whether these regulations are*

satisfactory.—The regulations applicable to India as a whole are applicable to the Engineer Services (Imperial and Provincial) in the Punjab as well, as laid down in Public Works Department Code, Volume I, Chapter II, paragraphs 141 to 160. No supplementary or subsidiary regulations have been framed for this Province. Covenanted temporary Engineers, and temporary Engineers appointed in this country, have been, however, occasionally appointed to the permanent Engineer services by the Secretary of State or the Government of India. This, however, has only happened when the demand for Engineers has been such as could not be readily met by the ordinary methods of recruitment laid down in the Public Works Department Code.

With regard to these regulations being satisfactory or otherwise, reference is invited to Chief Engineers' opinions* forwarded under letter No. 1851 E. I., dated the 21st April 1903, to the Chief Secretary to Government, Punjab.

(ii) *Rates of pay and allowances in force in 1890 and 1900 and at the present time, and whether the present rates of pay and allowances are satisfactory.*—The rates of pay compare as follows:—

Departmental rank.	1890.	1900.		1913.	
		Imperial.	Provincial.	Imperial.	Provincial.
Chief Engineer ...	Rs. 2,500	Rs. 2,500	Rs. 2,500	Rs. 2,750	Rs. 2,750
Superintending Engineer ...	Rs. 1,800	Rs. 1,800	Rs. 1,800	Rs. 2,000	Rs. 1,600
Executive Engineer ...	Rs. 1,000	Rs. 1,000	Rs. 1,000	Rs. 1,250	Rs. 1,200
Assistant Engineer ...	Rs. 700	Rs. 700	Rs. 700	Rs. 850	Rs. 850

Allowances.—(1) *Exchange compensation allowance* was generally admissible to Imperial Engineers in 1900; admissible in 1913 to those Imperial Engineers who rise to the ranks of Superintending Engineer and Chief Engineer, provided they were Executive Engineers, 1st grade, or higher rank on the 8th March 1908.

Note.—This allowance has practically been abolished for the executive ranks by the introduction of the time-scale in 1908.

(2) *Local allowance commonly known as jungle allowance.*—This allowance is admissible only to Divisional and Sub-Divisional Officers of the Irrigation Branch under the conditions and at the rates specified in Part III of appendix 19 of Public Works Department Code, Volume III. The allowance was not in existence in 1890. It was admissible in 1900 and is still admissible in 1913.

(3) *Local allowance.*—Chief Engineers who are also Secretaries to Government receive an allowance of Rs. 250. This allowance was not in force in 1890 or 1900, but is in force in 1913. Under-Secretaries to Government also receive as such a local allowance of Rs. 100 per mensem. This allowance was in force in 1890-1900 and is still in force in 1913. This allowance is now also granted to the Personal Assistant to the Chief Engineer, Irrigation Branch, but was not granted to that officer in 1890 and 1900.

Leave and Pension allowances. These are laid down in the Civil Service Regulations, Chapter XXX.

With regard to whether the rates of pay and allowances are satisfactory, reference is invited to Chief Engineers' opinions*, forwarded with letter No. 1851 E. I., dated the 21st April 1903, to the Chief Secretary to Government, Punjab.

(iii) *Number of posts in each grade, and the provision, if any, made in the cadre for leave and training.*—The sanctioned Engineer cadre for the Irrigation Branch is for 122 officers including a provision of 20 for leave but none for training. This number is made up as below:—

Appointments.	
Chief Engineer class ...	2
Superintending Engineer classes ...	10
Executive and Assistant Engineer classes ...	110
Total ...	122

Executive and Assistant Engineers are on a time scale of pay. Assistant Engineers ordinarily pass into the Executive class in the 9th year of service, provided they are fully qualified for the charge of a Division, but no officer can draw more than Rs. 800 per mensem in the case of Imperial Service or more than Rs. 535 per mensem in the case of the Provincial Service unless he holds a Divisional charge or a charge of equal importance.

In the Buildings and Roads Branch the cadre is as follows:—

Chief Engineer ...	1
Superintending Engineers including Sanitary Engineer ...	4
Executive Engineers ...	18
Assistant Engineers ...	18
Total ...	41

The sanctioned number for absentees is 6. No provision is made for officers under training.

APPENDIX V—continued.

(iv) What appointments outside the authorised cadre are held temporarily, or otherwise, by officers of the various services. There are no appointments in the Irrigation Branch outside the cadre that are held by Imperial or Provincial Service Engineers. There are, however, three posts in the Department in connection with the Central Workshops of the Department at Amritsar, which are held by officers covenanted out from Home and known as Covenanted Temporary Engineers, viz., (1) Superintendent and (2) two Assistant Superintendents. There are at present 54 temporary Engineers in the Irrigation Branch to supplement the strength of the Engineer establishment. These officers are on salaries varying from Rs. 750 to Rs. 200 per mensem, and their services are terminable at a month's notice. Their numbers fluctuate according as the work of the Department expands or contracts. Eleven permanent Engineers of the Irrigation Branch, Punjab, are on deputation,—3 to Siam, 4 to Delhi Province, one each to Baluchistan, Gwalior State, Central Provinces, and Buildings and Roads, Punjab. The posts vacated by the men on deputation have been filled by Tem-

porary Engineers in a few cases, but chiefly by upper subordinates.

In the Buildings and Roads Branch there are 3 officers on deputation,—one to the Simla Municipality as Resident Engineer, and 2 to the Imperial Works at Delhi. One officer is also on deputation to this branch from the Military Works Services as a specialist to take charge of the Simla Hydro-Electric Works. The services of Mr. Gemmel lent by the Irrigation Department have been placed at the disposal of the Education Department as Principal of the Government Engineering College at Rasul.

Seven temporary Engineers are employed on salaries from Rs. 400 to Rs. 600 on same conditions as in the Irrigation Branch.

(v) Whether any addition is required to the present cadre.—The question of addition to the present cadre in the Irrigation Branch is under consideration, and the result will be reported to the Secretary to the Royal Commission later. The Irrigation Branch any cadre is known to be much below requirements.

In the Buildings and Roads Branch no addition is at present contemplated.

APPENDIX VI.

Letter from the Chief Secretary to the Government of the Punjab and its Dependencies, No. 1787 (Home—General), dated Lahore, 5th November, 1913.

In continuation of my letter No. 1617 (Home—General), dated 7th October 1913, I am directed to forward, herewith, 20 copies of a letter No. 3100 E. I., dated 1st November 1913, from the Chief Engineer, Irrigation Works, Punjab, and of its enclosures, completing the information called for by the Royal Commission in respect of the Buildings and Roads and Irrigation Branches of the Public Works Department, Punjab.

Enclosures in Covering Letter from F. E. Gwyther, Esq., Chief Engineer, Irrigation Works, Punjab, No. 3100 E. I., dated Lahore, 1st November 1913.*

I.—NOTE, DATED 4th SEPTEMBER, 1913, BY MR. F. E. GWYTLIER, CHIEF ENGINEER, IRRIGATION WORKS, PUNJAB.

The subject of the present discussion on a reinforcement of the Sub-Divisional staff in the Punjab Irrigation Branch was only raised three years ago, and has for its avowed object the replacement of Temporary Engineers now employed in Revenue charges. I understand the Government of India would like to get rid, as soon as possible, of all temporary men, but Mr. Gordon's note of 5th September 1910 apparently contemplated their gradual extinction, for he retained 25 Sub-Divisions for them (i.e., for about half the number of temporary men now in employ).

2. Before proceeding to note on the suggestions made for reinforcement, I would like to touch on this question of Temporary Engineers: apparently Mr. Gordon decided that it was "not considered desirable to place men of this class in permanent charge of Revenue Sub-Divisions," and the Government of India have accepted the principle.

3. If the alternative was the employment of permanent Imperial or Provincial men, I should have no hesitation in accepting it myself. But as a fact the only alternatives presented to us are—

- (a) the larger employment of Upper Subordinates, or
- (b) the creation of a new agency or link in the shape of Canal Revenue Assistants, or
- (c) a reduction in the number of Sub-Divisional Officers by enlarging existing Sub-Divisions.

My own experience is that the bulk of our temporary staff is doing as good work as the Provincial men—better than the average Upper Subordinate. It contains men of talent, who have now considerable experience to back them (and for this reason they

are of considerable use to the State) and are more looked up to than the Upper Subordinate class.

4. There are two difficulties in the way of any drastic treatment of our temporary officers on the lines suggested above, and they are:—

(i) The impossibility of chucking out men who have done good work—some with 20 years' continuous service—and who would find it difficult to secure employment elsewhere. In the case of men with approved service this would be a cruel decision to adopt.

(ii) It would also be unnecessary. The Department is an expanding one—it is constantly called on to depute men for special works (e.g., to Native States, Central India, Delhi, Siam):† there is at present no sign in view of its having reached its utmost limit of expansion. On the contrary, the opening of the Beas Project will create a further enlargement of our staff—to mention only one work in view. To reduce our temporary staff now, create a new one in its place, and then re-entertain temporary men two years hence would in my opinion involve injustice and great hardship.

As it is, the Department is undermanned, we have to employ Upper Subordinates in Sub-Divisional charges who are too young, and are not fitted for them.

5. As regards the second alternative, I concur in the conclusion arrived at by the Government of India on the suggestion made to create a new class of Canal Revenue Assistants.

It is not clear why the term "Revenue" should be applied to them; I understand they will be selected men who will have to undergo a two years' Engineering course to fit them for technical work and Sub-Divisional Officer's responsibilities: but it is not explained how they will acquire Revenue experience—presumably while in charge of a Sub-Division. In that case they would in practice be equivalent to Provincial Engineers, with the added advantage of selection, and the immense disadvantage of forming a separate closed service without any prospects.

6. My reasons for objecting to this suggestion are the following:—

(a) It contemplates forming a new service to do work which is now being efficiently and ably done by trained Imperial and Provincial Engineers and by Upper Subordinates.

(b) If training of its selected officers on the Revenue side is contemplated, it would form something of a hybrid profession—neither Engineer nor Revenue.

† The displacement of the trained temporary staff by new men of whatever designation would mean to the Department the distinct loss of the time and money that has gone in training the former.—R. EGERTON PURVES, 21st September, 1913.

APPENDIX VI—continued.

(c) It would imitate the present temporary staff, in that it would employ men who could secure no "plums" and would have no future prospects. In time it would be a discontented service—claiming as in the case of Provincial and temporary men that they do the same work as other (e.g., Imperial) Sub-Divisional Officers and should be similarly treated. The plea would be difficult to resist and would lead to agitation.

(d) Such a staff would, if created now, lack weight and possess no experience—for the next 10 years it would not prove efficient.

(e) It provides for a staff which should ordinarily be catered for by Engineering Colleges. Sub-Divisional Officer's work is only partly Revenue, and it will be a bad day for the science of irrigation when the fact is lost sight of that it needs technical and an Engineer's training.

7. The third alternative, presented by the Government of India, involves a reduction of Sub-Divisional Officer's staff by enlarging Sub-Divisional charges—thereby reducing their number. This in my opinion would be a retrograde step, and involves a misconception of hard actual facts. We have for some time past felt that both Divisional and Sub-Divisional charges in the Punjab Irrigation Branch are far too large—it is recognised by all senior officers now that work has increased so greatly, the responsibilities and requirements exacted so large that Sub-Divisional Officers cannot efficiently run such charges: the result is that they are increasingly out of touch with the minutiae of their work and with the cultivating classes.

8. I attach a statement which compares our Punjab charges with those of other Provinces in India as regards—

- (a) the annual revenue collected,
 - (b) the annual expenditure incurred,
 - (c) area irrigated and cost of establishment,
- in them on the average: it throws into prominence the fact that our charges are generally 2½ times larger and heavier than those found necessary in the United Provinces and Madras (the largest irrigating Provinces approximating to the Punjab).

The fact merely strengthens the general opinion of senior officers (including myself) that both Divisions and Sub-Divisions are as at present constituted in the Punjab much too big, and any enlargement of them would prove to be a serious mistake. It illustrates as well the present difficulty of employing men of the calibre of the average Upper Subordinate Class in such big charges.

9. My objections to the scheme outlined by Government of India may be summarised as follows:—

(i) The introduction of new and additional officials between the Sub-Divisional Officer and the cultivators is unsound in principle; the object we should aim at is rather the reverse of this—to remove such possible obstacles and to encourage by every means possible more intimate relations between the two. That would be in the interests of the State, as well as of the science of irrigation. I think the introduction of two professional and one revenue officials as assistants to the Sub-Divisional Officer would indubitably tend to add more links in the chain connecting the latter with his zamindars; and I am confident that is not a proposal which would find favour with the latter class.

(ii) The additional staff would to a certain extent constitute a fresh burden on the Sub-Divisional Officer; he would have three more men to correspond with, to teach and to supervise.

(iii) It would not in practice relieve him of his existing burdens; the Sub-Divisional Officer would still be the responsible officer whom modern requirements and an increasingly stringent application of rules does not permit of being relieved. Any out-of-doors relief he might secure through this agency would be distinctly undesirable, as tending to loss of touch with important details he should have at his fingers' ends and to the creation of a type of Under-Divisional Officer which we would view with disfavour.

(iv) It would tend to increase the subordinate and Indian staff in a Division, with resultant loss of efficiency.

(v) And it will involve considerable additional ex-

penditure under establishment. The exact amount need not be worked out now, but it will probably amount to 2½ lakhs annually, say Rs. 400 per Division of two Sub-Divisions.

(vi) Additional expenditure will also be involved for touring accommodation—that at present available at rest-houses has been strictly limited to present staff and in some circles is admittedly insufficient even for that.

(vii) It is suggested that the Revenue Assistant would conveniently form a stepping-stone to the Deputy Collector grade; the want of such a link is not at all apparent, and its creation would deprive the existing Zilladar staff of direct promotion by selection from Zilladar, 1st grade, to Deputy Collector, 3rd grade. Even in our large charges no need has yet, I think, been expressed or felt as to the desirability of strengthening our Revenue staff.

(viii) As regards the two Upper Subordinates to be posted as Assistants to the Sub-Divisional Officer, the general feeling is that such work would not prove good training for them, nor tend to qualify such men for holding charge of a Sub-Division in their turn; they will lose the advantages of training in a section, and will tend to degenerate into roving agents in out-of-the-way places on odd jobs for the Sub-Divisional Officer.

(ix) Finally, when making proposals of this kind, we must not lose sight of the possibility of fixed canal assessments replacing our present system, thereby relieving us of some Revenue work and freeing the hands of the Sub-Divisional Officer for greater attention to other minutiae.

10. That some relief to the present congestion is desirable is generally admitted, but I do not think it will be secured by getting rid of our Temporary Engineers, not because the bulk of them are admittedly inefficient, but merely because they are employed for temporary service. The fact that we have permitted them to gain considerable experience in that class of work (Revenue), without protest, for many years, cannot be ignored.

Nor do I consider the creation of a new special class of Sub-Divisional Officers (Canal Revenue Assistants) with limited prospects and forming a closed service, likely to help us out of our difficulty. Such a staff would be created at the expense of the Provincial Engineer Establishment and of the Upper Subordinates without the distinct advantages of either; there is little doubt in time it would claim those of the former, on the obvious grounds that it does the same work.

11. I do not think we should lose sight of the necessity for keeping up a limiting number of European Officers in the Department; it is now a very important Revenue earning department, and it is entirely to the interest of the State to employ officers who are respected and looked up to. In this respect we must not place the independent Punjabi on the same footing as the people of other Provinces. I mention this merely to indicate the need for caution in creating a new staff, and in employing too many Upper Subordinates as Sub-Divisional Officers (these have not come up to average expectations in Revenue Sub-Divisions and do not command the respect that is desirable).

12. My own proposals as alternatives to these two schemes are the following:—

(A) Increase the number of Divisions in the Irrigation Branch; this is a necessity that must be faced. It need not be done all at once.

(B) Decrease to some small extent the size of present Sub-Divisional charges by increasing their number (this refers to admittedly unwieldy charges).

(C) The extra Divisional Officers required under (A) would be automatically provided by our present cadre, in which in 1914 there will be more officers qualified to hold Divisions than there will be Divisional charges available.

(D) Provide for the additional staff that will be needed by—(a) additional recruitment in the Provincial Engineer Service and in the Imperial; (b) retaining the best of our temporary officers on a permanent non-pensionable footing; and (c) the recruitment of only selected candidates trained as Upper Subordinates at Rurki or Rasul.

APPENDIX VI—continued.

Comparative Statement showing average area of irrigation per Division and Sub-Division and Cost of Establishment on same basis for three years ending 1911-12.

Particulars.	UNITED PROVINCES.			PUNJAB.		
	1909-10.	1910-11.	1911-12.	1909-10.	1910-11.	1911-12.
Area irrigated (a) ...	Acres. 2,513,000	Acres. 2,269,000	Acres. 2,442,000	Acres. 6,481,000	Acres. 6,705,000	Acres. 7,728,000
Number of Divisions (b) ...	24	24	24	25	25	25
Average per Division ...	104,708	94,542	101,750	259,240	268,200	309,120
Number of Sub-Divisions (b) ...	62	62	62	71	71	71
Average per Sub-Division ...	40,532	36,597	39,387	91,282	94,436	108,845
COST OF ESTABLISHMENT CHARGED TO REVENUE.						
Revenue Management ...	Rs. 13,07,880	Rs. 12,41,972	Rs. 13,65,307	Rs. 26,83,067	Rs. 26,32,955	Rs. 27,61,943
Maintenance of Works ...	5,48,358	5,15,269	5,02,977	8,32,141	7,47,061	8,21,894
Total (c) ...	18,56,238	17,57,241	18,68,284	35,15,208	33,80,016	35,83,837
Number of Divisions ...	24	24	24	25	25	25
Average per Division ...	77,343	73,218	77,845	1,40,608	1,35,200	1,43,353
Number of Sub-Divisions ...	62	62	62	71	71	71
Average per Sub-Division ...	29,939	28,342	30,134	49,510	47,606	50,476
Establishment charges per acre irrigated (c)/(a) ...	0.74	0.77	0.76	0.54	0.50	0.46

(a) Taken from Statistical Statement III E of the Annual Administration Report.

(b) Revenue Divisions only; for United Provinces taken from Classified List and Distribution Return of establishment corrected to 30th June, 1912, omitting Bhimgoda Weir Division and Gangao Dam Division.

(c) Taken from Statistical Statement I-C of the Annual Administration Report.

SIMLA :
The 4th September, 1913.

F. E. GWYTHYER,
Chief Engineer, Irrigation Works, Punjab.

Statement showing how the Divisions and Sub-Divisions are held at present.

Circle.	Executive Engineers.		Sub-Divisional Officers.				Remarks.
			Engineers.		Upper Subordinates.		
	Europeans.	Indians.	Europeans.	Indians.	Europeans.	Indians.	
Western Jumna Canal	2	1	4	3	2	2	* Sutlej Survey Division. One Sub-Division Vacant
Sirhind Canal	1	3	2	4	—	5	
Upper Bari Doab	3	2	4	3	—	5	
Lower Bari Doab	{ 2 *1 }	1	3	{ 3 *2 }	—	4	
Derajat	4	—	3	3	1	3	One Division vacant.
Lower Chenab Canal	5	1	6	2	1	9	
Upper Chenab Canal	1	2	3	3	—	5	
Lower Jhelum Canal	3	—	4	1	—	4	
Upper Jhelum Canal	4	—	10	2	—	4	
Swat River Canals	4	—	9	1	2	2	
Total	30	10	48	27	6	43	
Northern { Europeans ... 46 Indians ... 34	Upper Subordinates in Sub-Divisions ... 21		Ditto ... 28		Divisions ... 18		
Sub-Divisions ... 62							
Southern { Europeans ... 38 Indians ... 46					Divisions ... 22		
Sub-Divisions ... 62							

II.—NOTE, DATED 25TH SEPTEMBER 1913, BY MR. R. EGERTON PURVES, CHIEF ENGINEER, IRRIGATION WORKS, PUNJAB.

I agree with Mr. Gwyther in his note, dated 4th September 1913, in all but the remedy proposed for the present state of affairs, but before offering my own suggestions I should like to emphasise the fact that the work of the Department has been growing faster than the corresponding increase in the number of charges of each kind. For this purpose I have expanded the statement attached to Mr. Gwyther's note (see annexure), so as to include the Triple Project and the North-West Frontier Province (under construction in 1912), but not Baluchistan or the Amritsar Workshops Division. I have also included other items for comparison with the conditions prevailing in the adjacent United Provinces.

2. The resulting statement bears eloquent testimony, if that were wanted, to the far greater volume of work required of the Executive Officers in the Punjab. The figures, however, need some explanation before correct inferences can be drawn therefrom. I propose to deal with the following points:—

- Irrigated area.
- Intensity of irrigation.
- Length of channels to be maintained.
- Incidence of cost of establishment per acre irrigated.

3. Irrigated area.—In the United Provinces there are 24 Divisions and 62 Sub-Divisions for an irrigated area of something like 2½ million acres. In the

APPENDIX VI—continued.

Punjab, when fully going in about two years' time, there will be, on the present basis of provision, 41 Divisions and 125 Sub-Divisions for 9 millions irrigated. The number of charges based merely on the irrigated area should be more than three times those in the United Provinces. The volume of work is measurable mainly in two ways, viz., (a) by the ground to be covered for field work and (b) by the number of cultivators who produce office work. The unit of area (the acre) being the same in both cases, the amount of field work to be got through would be practically equal per unit. On the other hand, the number of cultivators, or, in other words, the size of holdings, differ considerably in the two Provinces. In the United Provinces the size of holdings decreases from west to east and increases southward. In the Punjab the size of holdings increases from east to west. On both sides of the river Janna the size of holdings may be said to be the same. If we allow (and the allowance seems reasonable when measured by the density of the rural population of the Agra Province, 367 per square mile as against 185 in the British territory of the Punjab figures of 1891) that the average volume of work arising from an acre in the United Provinces is twice that from an acre in the Punjab, the relative index figures for numbers of charges in the two Provinces would be—

United Provinces to Punjab for field work... 1:3

Ditto ditto for office work... 5:9
and it appears quite fair to estimate that, for the entire volume of work, the proportion is as 1:2.

4. Intensity of irrigation.—As this figure takes into account the gross commanded area, it is really a better measure of the volume of work than the irrigated area. We find (see attached statement) that in the United Provinces the intensity is 14 per cent., whereas in the Punjab it is now 40 per cent. and will become 42 per cent. during the next few years. Making the same allowance as before the relative index figures will become:—

United Provinces to Punjab for field work... 1:3

Ditto ditto for office work... 2:3
and the final result will be as 1:2.

5. Lengths of channels to be maintained.—In the United Provinces there are 1,812 miles of main canal and 9,379 miles of distributary channels to be maintained, and in the Punjab the same figures will, in the course of 3 or 4 years, be 4,644 and 13,356, respectively. Now the main canal and branches call for far more attention than the distributaries, in the length of ground to be covered. This is one of the reasons why complaint is sometimes heard against Sub-Divisional Officers that the distributaries have been neglected. In such cases, I think, the explanation will be found in the fact that relatively the officer has had too large a proportion of main canal to maintain. In order to arrive at a fair comparison of the relative volume of field work arising out of this item, it seems fair to count each canal mile as equal to 4 distributary miles. Correcting the mileage figures by this multiplier, the relative figures of the two Provinces will become—

For each Division as ... 692:861

Ditto Sub-Division as ... 268:302

On this basis then the Punjab Divisions are larger by 26 per cent. and the Punjab sub-Divisions are larger by 13 per cent. The extra work entailed under this head is in addition to the volume of work arising out of the larger irrigated area. It would also appear that the Punjab Divisions must be reduced in size relatively more than the Sub-Divisions.

6. Incidence of cost of establishment per acre.—The figures under this head are not complete for the Punjab as a whole. At present a comparison can only be made between the United Provinces and the open canals in the Punjab. The relative figures are 0.76:0.53 per acre, which shows that the United Provinces work costs 43 per cent. more than the same work in the Punjab. The relative proportions in detail are:—

	United Provinces.	Punjab.
Intensity of irrigation (modified) 1	:	2.0
Whole cost ... 1	:	1.9
Revenue management only ... 1	:	2.0
Maintenance of works only ... 1	:	1.5

From above it will be seen that the cost of revenue management is about the same proportionately as the relative volume of work due to intensity of irrigation, as modified by me, viz., as 1:2. But the cost of establishment employed on the maintenance of works is about 25 per cent. less. This may be compared with the figures of 26 per cent. arrived at differently in paragraph 5 when considering the lengths of channels to be maintained. The coincidence is quite accidental and has not been specially worked up to agree. We may take it then that our superior staff requires to be strengthened by 25 per cent. The cost of this item in the Punjab should be twice that of the United Provinces, and therefore instead of Rs. 8,00,350 it should be Rs. 10,44,200 or thereabouts. An increased expenditure of Rs. 2,40,000 is required to make the Punjab supervision as efficient at least as the United Provinces supervision.

7. I may now summarise the results of this enquiry. In considering the relative irrigated areas and intensity of irrigation, it has been found that the volume of work in the Punjab is twice that in the United Provinces per unit considered: also as regards lengths of channels to be maintained, the Punjab Divisions are 26 per cent. larger and the Sub-Divisions 13 per cent. larger than in the United Provinces: and that when we compare the cost of establishment on maintenance (superior staff), we find that the Punjab is undermanned by 25 per cent. as measured by the United Provinces standard. It is not contended that these deductions are quite accurate or free from objection. The main point, however, which is clear is that viewed in any manner the superior staff is insufficient in the Punjab, and we have gradually allowed ourselves to drift into a condition of overwork with consequent proportionate loss of efficiency. In my opinion we are in defect to 25 per cent. of our superior staff.

If we increase our superior staff by providing Rs. 2,40,000 more under cost of establishment on maintenance of works (see paragraph 6 above), the total cost of establishment would be increased from Rs. 34,93,000 to Rs. 37,33,000 and the incidence of cost per acre would be raised from 0.53 to 0.57, and this would still be less than 0.76 in the United Provinces. I have no doubt that in the course of time when the average of holdings in the Punjab becomes smaller and the volume of work increases, we shall be forced to make a corresponding increase in the staff. We are, however, concerned with the present condition of things. The increase suggested by my note is so modest that I believe no serious objection will be raised, and I also believe that the money so put out will be repaid fully in other ways to Government. It will give our Executive Officers much relief and will also give them the time to study and suggest improvements. We are now coming to a time when forward movements in all directions are desirable and necessary. We must consolidate and improve the immense property in our keeping.

8. I propose in the paragraphs following to consider the manner in which this increase of 25 per cent. of the Executive staff should be carried out to give the best results:—

We have at present—

Divisions ...	41
Sub-Divisions ...	125
Total ...	166

and when the canals now under construction are completed we shall have—

Divisions ...	37
Sub-Divisions ...	106
Total ...	143

based on the same standard which we have found to be insufficient when compared with the United Provinces. To improve this condition of things we ought to have 35 new appointments in the Executive and Assistant charges plus the usual additions for leave vacancies.

9. Our present proportion of Divisions to Sub-Divisions is (or will be in 2 or 3 years) as 37:106 or

APPENDIX VI—continued.

as 1:2.89. Congestion in the lower ranks and loss of efficiency is sure to come in the near future, if we continue to maintain this ratio, and our qualified and senior Assistants will not get Divisions as soon as they ought to. Unless the ratio is changed, we shall revert to the congestion which occurred in 1888 to 1895, when men served in Sub-Divisions for periods varying up to 14 years' service. We have only been able to maintain a suitable flow of promotion in the permanent staff by the employment of a large and growing (permanently employed) staff of Temporary Engineers, who bulk almost wholly as Sub-Divisional Officers. It was foreseen almost from the first that the recruitment of the temporary service was a clumsy makeshift which transferred the onus of finding a true solution of the difficulty to posterity. The time has come when we may deal with the question correctly or devise some other makeshift to add to the difficulties of posterity of a later date. It has been accepted that the temporary service, with its difficulties for the employer and its hardships for the employed, must go, and the sooner we can do this with the least amount of hardships to individuals the earlier shall we be out of a difficult position. In order therefore not to cause congestion, it will be necessary to alter the ratio of Divisions to Sub-Divisions, while we are adding to the staff as a whole for other reasons. I make out that our ratio should be reduced from 1:2.89 to 1:2.4, in order to meet all the conditions of the Punjab. From the United Provinces figures (see statement attached) the ratio is 24:62 or as 1:2.5. This higher ratio is, I think, due to the fact that relatively more Upper Subordinates are employed habitually in Sub-Divisions. Of 86 appointments, the Upper Subordinates may number 22 or say 25 per cent. We shall need a superior staff of something like 250, and cannot at present find more than 40 suitable Upper Subordinates or only 16 per cent. It is, therefore, clear that as things are in the Punjab the proper ratio of Divisions to Sub-Divisions should not be greater than 1:2.4.

10. It is not only impossible but not desirable to make the Divisions all more or less uniform in extent. Not only does the intensity of work vary, but the necessities differ, and the ability of our officers, by reason of age and experience and other causes, varies. I would therefore propose to create a certain number (to be determined on recasting the charges) of light Executive charges to be placed in charge of the less able or younger Executives. The light Executive charges might, for the purpose of effecting some small savings, be termed independent Sub-Divisions, and they might ordinarily consist of one or two Sub-Divisions in charge of Assistants and a small head-quarter section to be under the direct orders of the Executive Engineer. No young Executive Engineer or, for the matter of that, an older and less able officer need take exception to this arrangement. He would have in charge of the direct section a good Upper Subordinate in training for Sub-Divisional charge, and otherwise there would be less work than at present owing to the reduction in size of Divisions.

11. Under the redistribution of charges on the completion of the canals now in progress, the total number of charges is to be $(37 + 106) = 143$. I would increase these by 30 for the present. There ought to be 35 new appointments as noted at paragraph 8 above, but 30 will meet immediate requirements. We should have then $(143 + 30) = 173$ charges, which should be arranged in the following manner:—

Divisions	...	...	...	51
Sub-Divisions	...	...	...	122
Total	...	...	...	173

The ratio adopted is 1:2.4. These figures will supersede the total of 166 existing charges or 143, as they

might have become, had we reduced the charges, as shown in the statement.

12. We can now estimate our full requirements making provision for leave vacancies:—

Chief and Superintending Engineers, as at present	...	...	...	12
Under-Secretaries and Personal Assistants to Chief Engineers, as at present	...	...	...	3
Executive Engineers of Divisions	...	...	...	51
Sub-Divisional Officers	...	...	...	122
Personal Assistant to Superintending Engineers	...	...	...	5
For surveys and new construction—Sutlej Valley Canal, &c.—including 2 Superintending Engineers for same	...	...	...	32
For Baluchistan	...	...	...	2
For Amritsar Workshops	...	...	...	3
Total	...	...	...	230
Allowance for permanent Engineer absentees (i.e., 20 per cent. 165)	...	...	...	33
GRAND TOTAL	...	...	...	263

This looks a large figure, but it is not one bit too big for the magnificent property to be cared for.

13. I propose to provide for this staff in the following manner:—

Permanent Imperial and Provincial Engineers	...	...	...	198
Temporary Engineers, pure and simple	...	...	...	25
Upper Subordinates in habitual charge of Sub-Divisions	...	...	...	40
Total as above	...	...	...	263

or omitting Upper Subordinates, we should have 223 Engineer officers against which we have at present—

Permanent Imperial and Provincial Engineers, as per sanctioned cadre	...	...	...	122
Covenanted Engineers	...	...	...	3
Temporary Engineers	...	...	...	53
Total	...	...	...	178

We are therefore 45 men short, which should be made up in the next 3 or 4 years during which time the scheme, if agreed to, could be carried through. The changes could be carried over 3 or 4 years.

14. Now as to recruitment of the permanent staff—

We shall need a permanent staff of	...	...	...	198
Whereas we have at present only	...	...	...	122
We require	...	...	...	76

I would propose engaging at once from 25 to 30 of the very best of the Temporary Engineers, bringing them in on various positions on the list to prevent congestion among themselves and others. I believe we could find suitable men of experience in our temporary staff for recruitment immediately. The remainder of the staff I would recruit from present sources of supply spreading out the additions over four years. Later on in 3 or 4 years it might be possible to give a few of the best Temporary Engineers remaining with us permanent appointments before dispensing with the services of the last.

APPENDIX VI—continued.

Statement comparing the United Provinces with the Punjab.

Items of comparison.	United Provinces.	PUNJAB AND NORTH-WEST FRONTIER PROVINCES.					
		Open Canals.	Triple Project.	North-West Frontier Province.	Total.		
Gross commanded area	Acres. 17,586,100	Acres. 16,512,632	Acres. 3,987,216	Acres. 724,695	Acres. 21,224,543		
Average annual irrigation, three years ending with 1911-12	2,407,942	6,594,094	1,871,235	161,000	9,007,829		
Estimated irrigation	...	...	...	381,500	...		
Intensity of irrigation per cent.	14	40	47	75	42		
Miles of channels to be maintained.	Miles. 1,812	Miles. 3,997	Miles. 452	Miles. 195	Miles. 4,644		
Canals and branches	...	...	...	...	...		
Distributaries	...	...	...	...	...		
Average cost of establishment.	Rs. 13,05,050	Rs. 26,92,650	Rs. ?	Rs. ?	Rs. ?		
Revenue management	...	...	...	...	...		
Maintenance of works	...	...	...	...	...		
Total	18,27,250	34,93,000	—	—	—		
Number of Divisions	24	25	At present 12	Re-quired for revenue. 9	At present 4	Re-quired for revenue. 3	At present 41
Number of Sub-Divisions	62	71	40	27	14	8	125
Average cost of establishment per acre irrigated	Rs. 0.76	Rs. 0.53	Rs. ?	Rs. ?	Rs. ?	Rs. ?	Rs. ?
Average area irrigated or estimated to be	Acres. 100,331	Acres. 263,964	Acres. 219,026	Acres. 180,833	Acres. 243,440		
Per Division	Miles. 76	Miles. 160	Miles. 50	Miles. 65	Miles. 125		
number of canal miles to be maintained.	...	...	...	...	...		
number of distributary miles to be maintained.	391	426	245	162	361		
Average area irrigated or estimated to be	Acres. 38,338	Acres. 92,875	Acres. 73,008	Acres. 67,812	Acres. 85,000		
Per Sub-Division	Miles. 30	Miles. 56	Miles. 17	Miles. 24	Miles. 44		
number of canal miles to be maintained.	...	...	...	...	...		
number of distributary miles to be maintained.	152	147	82	61	126		
Assuming canal inspection=4 times distributary inspection, the relative miles for inspection purposes would be:—							
Per Division	692	1,066	445	422	861		
Per Sub-Division	268	375	150	157	302		

APPENDIX VII.

Memorandum prepared by the Government of the United Provinces of Agra and Oudh relating to the Public Works Department.

I.—GENERAL.

Division of the Engineering Establishment into Imperial and Provincial.

1. Before any of the other questions which concern the Public Works department are considered, it is first of all necessary to examine the present constitution of the department with reference to its division into Imperial and Provincial Branches.

The constitution of the Provincial service was the outcome of the recommendations of the Public Service Commission of 1888.

The recommendations of this Commission were as follows:—

(1) "The Engineer establishment of the Public Works department should consist of an Imperial Branch and of Provincial branches."

(2) "The Imperial Branch should consist of such a number of Royal Engineers as may be required as a reserve for Military purposes, over and above the officers employed in the Military Works Branch and of Civil Engineers recruited in England."

(3) "The strength of the Imperial Branch should not be greater than is necessary for purposes of control and direction and for the execution and repair of works calling for high Engineering skill, and the recruitment from the Coopers Hill Engineering College which appears excessive should be regulated accordingly."

(4) "The conditions of service in the Imperial Branch should be fixed with a view to secure the necessary qualifications in England, and should, as far as possible, be uniform for all officers employed in it."

(5) "The Provincial Branches should be of a strength adequate for the construction and maintenance in the several provinces of works not ordinarily calling for high Engineering skill."

(6) "The recruitment for the Provincial Branches should be made by the direct appointment to the lowest grades of qualified Engineers from the Indian Engineering Colleges, and in exceptional cases by promotion from the Upper Subordinate grades."

(7) "There should be at least one College in India thoroughly well equipped for providing a high education for Engineers for the Provincial Branches, and such College should be open to all classes of His Majesty's subjects."

(8) "The conditions of service as to pay, furlough and pension should be fixed for the Provincial Branches without reference to those of the Imperial Branch."

(9) and (10) These proposals refer to the Accounts branch only.

The Commission held that the proposals embodied "principles on which the establishment of the Public Works department should be reorganised in the interests alike of economy and of efficiency and as furthering the larger admission of qualified Natives of India to employment in this important department of the Public Service."

2. The history of the reconstitution of the Public Works department Provincial service in accordance with those recommendations and the difficulties which have arisen therefrom are set forth in the appended article* on the Public Works department Provincial service which appeared in the *Pioneer* of August 14, 1912.

The article gives a clear résumé of how the service now appears to the ordinary man of business.

The Commission of 1888 recorded that "the distinctions inevitable in a department so constituted and

* Printed as annexure.

recruited give rise to friction and jealousies which must affect the efficiency of its officers. Royal Engineers, Coopers Hill Engineers, and Engineers educated in India all belong to the same service, but, as shown above, the conditions of service of each of these classes differ in regard to leave and pension; and the men appointed in India not unnaturally claim to be placed on an equal footing with their brother officers."

3. The object that the Commission had in view in making their recommendations regarding the formation of Imperial and Provincial services with distinct conditions of service was as follows:—

The Commission considered that "some of the operations of the Department require the highest Engineer skill and training obtainable in England, and for the control and direction of a great Department, the annual expenditure of which is reckoned by millions, qualifications are wanted which are not at present readily attainable in this country," whilst "on the other hand, much of the work which falls on to the Engineering establishment is such as may be and is performed efficiently by officers who have received their professional education in India." To cope with these two grades of work it was recommended that the service of engineers should be divided into two branches, Imperial and Provincial.

4. It has been found impracticable and undesirable to lay down definitely that certain divisional charges or even a fixed proportion of divisional charges should be reserved for Provincial Engineers.

The result is the present anomalous state of affairs in which we have two classes of men in a professional service, some of them educated approximately up to the same standard and performing the same duties, but at the same time under entirely different rules as regards pay, leave and pension. Thus, in spite of the changes made, the same anomalous state of affairs continues on which the Commission specially commented as giving rise to friction and jealousies which were bound to affect the efficiency of its officers. Such a state of affairs does not exist in any other service in India.

The Provincial Service Officers of Civil and Medical services, for instance, are undoubtedly inferior as regards education and training to the officers of the Imperial service, and, moreover, the duties they have to perform are of a lower standard.

The superior Accounts branch of the Public Works Department with far less responsibility and need of character and initiative, less study to keep abreast of the times, less exposure and isolation and greater comforts and amenities, is maintained on an Imperial footing, and it is certainly an anomaly that some of the Engineers should be inferior in position to their Auditors.

II.—PROPOSED RECONSTITUTION OF THE DEPARTMENT.

1. The only solution of this difficult question which, in the opinion of the Local Government, is likely to bring contentment to the department and to promote efficiency, is the following:—

(a) The abolition of the Provincial service and the placing of all officers in the Imperial service under the same rules as regards pay, leave and pension.

(b) The constitution of an improved upper subordinate establishment. This establishment to consist of:—

(a) A Sub-Engineer class with pay from Rs. 200 to Rs. 600, and (b) an upper subordinate class with pay from Rs. 100 to Rs. 300.

The men for class (a) to be recruited from passed Engineer students from Indian Colleges and by promotion of deserving men from class (b). Only men in the Sub-Engineer class should, it is considered, be eligible for the charge of sub-divisions. Men of the Sub-Engineer class should not be promoted to the Imperial service, as, in the opinion of the Local Government, there should be a hard and fast line of distinction.

In order, however, to provide opportunities for advancement to specially meritorious Sub-Engineers, such officers, it is suggested, might be made eligible for three or four divisional charges on a special rate of pay, say Rs. 700 to Rs. 800 per mensem.

In the manner briefly indicated above, the Local

Government is of opinion that a class of Sub-Engineers would be obtained consisting of well educated men constituting a less highly paid service recruited in India for work not requiring a high degree of scientific attainment, but who would be well qualified to take charge of sub-divisions and whose pay would be sufficiently good to place them beyond the temptation inevitable to men responsible for the expenditure of large sums of Government money.

This reorganization would in fact constitute a Provincial service under another name.

2. The accepted strength of the cadre provides for one Assistant Engineer to each Executive Engineer, so that there is a marked demand for well-trained Sub-Engineers to replace a considerable number of men who have of necessity been placed in charge of sub-divisions, but who, on account of their status and inferior qualifications and character, are quite unfitted for such charges.

On these lines the department would be composed of:—

(a) Imperial Engineers recruited in England and in India, highly trained for the more scientific work of the department.

(b) A less highly paid service recruited solely in India for other work in the department composed of:—

- (1) Sub-Engineers.
- (2) Supervisors.
- (3) Overseers.
- (4) Sub-overseers.

III.—METHOD OF RECRUITMENT OF IMPERIAL ENGINEERS.

1. The magnitude of the Railway and Irrigation works in India, the large sums of money spent and earned by those branches, the varied and difficult work of the general branch, having regard to the increasing demand for works of sanitation and water-supply, all demand a thoroughly efficient Engineering establishment.

This being the case it is clear that an inferior engineer, whatever the economy due to low pay, will be a costly servant to the State and that inefficiency will be not only an extravagance but a positive menace. While it is more than doubtful if the engineers who now receive appointments from the Indian Engineering Colleges are as well educated and trained as the men who are now recruited in England, it is unquestionable that the European is as a rule far superior to the Indian and even to the country-born European educated in India in those essentials of character, business and administrative ability without which technical skill alone is of little avail.

While there are signs of improvement, such improvement is likely to be of slow growth, and it is unquestionable that any reasonably high standard of efficiency must mean the employment of a very large proportion of Europeans for a long time to come, not because they are Europeans, but because the necessary qualifications and aptitude and intense love for the profession have not so far been found in India in any appreciable degree. If this be accepted, it will be necessary to lay down the proportion of men to be recruited in England and in India, a proportion which should be subject to revision from time to time as the Indian recruit justifies his fitness for increased employment.

2. According to a reply given in the House of Commons on 19th April, 1911, the number of men recruited in England through the Selection Committee of the India Office without competition has been in recent years as follows:—

1908	...	...	...	...	39
1909	...	...	...	...	30
1910	...	...	...	...	30
1911	...	...	...	...	28

the average annual recruitment may be taken as 30 of which according to rule 10 per cent. must be Indians. The annual recruitment in India for the Provincial service is 14, distributed in the ratio of 9 to 5 or 10 to 5 in alternate years between Assistant Engineers and Upper subordinates.

The present proportion of Europeans recruited in England to Indians recruited in England and in

India is therefore—27 : 17, that is 38 per cent. of the appointments have in recent years been given to Indians; but it must be remembered that the recruitment from England has at the same time been considerably below what is considered to have been necessary to maintain the Engineer cadre at its proper strength and efficiency.

The Local Government is of opinion that, for the present at any rate, the proportion of Europeans, i.e., including Europeans recruited in India, to Indians in the department might be fixed at 2 to 1.

With say 45 annual appointments therefore 30 would be Europeans and 15 Indians whether recruited in England or in India.

3. *Recruitment in England.*—Every candidate should have been through a three years' University course and obtained one of the University degrees mentioned in Appendix I of the present rules for appointment of Assistant Engineers in England, in order to ensure that he shall have undergone a proper course of study at the best Engineering Colleges in the United Kingdom and that he has qualified up to a high standard.

The A.M.I.C.E. examination alone should not be considered a sufficient qualification.

4. The Selection Committee should consist of—

(1) A retired Lieutenant-Governor or Chief Commissioner as President.

(2) An eminent Engineer with considerable experience in England preferably a past President of the Institution of Civil Engineers.

(3) An eminent Principal or Professor of an Engineering College of high standing in England.

(4) A recently retired Engineer of the Indian Public Works Department.

(5) An engineer of the Indian Public Works Department actually in service, selected from the men who may be at home on leave.

This Committee should select two or three times as many candidates as there are vacancies.

5. The candidates should be from 21 to 24 years of age and selected candidates should be required to undergo a competitive examination, the order of passing determining the seniority of the candidates who receive appointments.

On arrival in India the selected candidates should undergo a course of practical training for one year and should only be confirmed if this has been satisfactory; otherwise, they should, in the case of Europeans, be paid their passage money back to England.

6. The number of Europeans fixed for recruitment in England should include Royal Engineers who may be appointed to the permanent scale of the department, but such officers should only come in at the bottom of the list, otherwise not only is the promotion of Civil Engineers to the administrative appointments prejudicially affected but also the amount of pension they may earn.

Under the present rules additional pensions are granted to Civil Engineers who have served certain terms in the administrative grades, and from this they may be debarred if senior Royal Engineers are brought in over their heads.

7. *Recruitment in India.*—Recruitment in India should preferably be from one Central College for Engineers only.

Entrance to this college should be by selection combined with a qualifying examination; the selection committee to consist of the Principal of the College, the Director of Public Instruction, and one of the Chief Engineers of the province.

Candidates who have passed successfully through a three years' course and after a final competitive examination have been successful in obtaining appointments, should be appointed as probationary Assistant Engineers and should undergo a course of practical training for one year. If this has been satisfactory, they should be confirmed, otherwise their services should be dispensed with.

The age for appointment should be the same as for men recruited in England. The standard of training at this Central College and the standard of the final examination should be the same as fixed for candidates recruited in England.

The most suitable College in His Honour's opinion for the training of Engineers for the Public Works

Department is Rurki but emphasis must be laid on the fact that the stamp of recruits from Rurki in recent years has been disappointing and there is reason to fear that it is deteriorating.

The general education of the students who now enter Rurki is as a rule defective. The Anglo-Indian recruits of the present day are much below the class of those who entered thirty years ago and the Indian recruits are decidedly inferior. Not only is this the case but the course of training at Rurki is markedly inferior to the course of training at the Universities which it is recommended that recruits from England should undergo. Until a better class of recruits is obtainable in India and the College is thoroughly reorganised to conform to the standard of training at the Universities in England, it will not, in the opinion of the Local Government, be possible to train Engineers with the same educational qualifications as can be obtained amongst those recruited in England.

It will therefore be necessary to restrict the number of appointments to those only who have approximated very nearly to the standard of the men appointed in England and for several years at least to give a greater proportion of the appointments than the two-thirds suggested to the men recruited in England.

The results of the final examination for the Engineering students at Rurki are known in July and there should be no difficulty in selecting the number of men who have qualified for appointments up to the required standard, subject in the case of Indians, to a maximum of one-third of the total number of recruits required in any year; the balance to make up the full number would then be selected from the candidates in England in the order of merit of passing the final competitive examination.

IV.—SYSTEM OF TRAINING.

1. The present system of departmental examination is considered sufficient. The Local Government would however recommend that greater facilities be given to officers to go to Europe in order to visit and report on works.

Modern Civil Engineering is a highly specialized profession and progress in methods and materials of construction is very rapid. A Civil Engineer, if he is to remain professionally efficient must therefore study up-to-date methods and appliances for executing work. The rules for the grant of study leave to officers of the Royal Army Medical Corps and Indian Medical Service should, it is considered, be extended to officers of the Public Works Department.

V.—CONDITIONS OF SERVICE.

1. It would appear desirable to the Local Government that a distinctive title should be given to the service since the term Public Works Department is used both by subordinates and clerks and hardly distinguishes an Engineer. The title suggested is Imperial Engineer Service corresponding to the title of Imperial Forest Service for the superior officers of that branch.

2. The Local Government is of opinion that the rules in the code I/427—430 relating to inefficient officers should be enforced with greater strictness in order to get rid of such officers.

3. The present post of Secretary to the Government of India is as a rule held by an officer of the Irrigation branch and the Local Government is of opinion that there should be either two Secretaries to the Government of India, i.e., one for each branch, or that the post should be given to either branch in rotation.

4. The Local Government holds strongly the opinion that the number of Temporary Engineers should be reduced to the requirements of work of a purely temporary nature.

The lamentable shortage of Engineers on the permanent strength has necessitated the employment of this class, in many cases for a long term of years, and in some cases in charges which should be held by permanent Engineers. The result is a discontented class of men, mostly of inferior qualifications, who have a very real grievance in that whilst often performing the same duties as permanent Engineers they draw considerably less pay and have very precarious prospects.

APPENDIX VII—continued.

VI.—CONDITIONS OF SALARY.

1. The system of annual increment in salary meets with general approval.

2. Promotion to Chief Engineer, 1st class, is so often blocked that many specially deserving officers never obtain a chance of promotion to the higher rate of pay or only do so shortly before they retire.

His Honour considers that there should be only one class of Chief Engineer as for Commissioners of divisions in the civil service, and that the rate of pay of a Chief Engineer should be Rs. 2,750. A Secretary to a Local Government or administration should get in addition a local allowance of Rs. 250 as at present.

VII.—CONDITIONS OF LEAVE.

1. The Local Government considers that the amount of leave allowed under the existing rules is sufficient, but that furlough allowances at present are inadequate in the case of junior officers and debar men from taking as much furlough as is desirable for their health's sake. Under the present rules an Imperial Engineer going on furlough to England is entitled to furlough allowance as follows:—

After 8 years' service	£279
" 15 "	£427-10-0

The Local Government would recommend that these allowances be increased to £350 after 8 years' service and to £500 after 15 years' service.

2. The desirability of granting study leave has already been noted on.

3. The Local Government considers that the Indian Service leave rules should be abolished and there should be one set of rules for all Engineer officers.

VIII.—CONDITIONS OF PENSION.

1. His Honour is not prepared to recommend any proposal for increased pensions, other than invalid pensions. The non-effective charges in His Honour's opinion are already too high. His Honour would however recommend greater liberality as regards invalid pension which might be increased in accordance with the following scale:—

Year of completed service.	Invalid pension, Civil Service Regulations, Article 641.		Proposed invalid pension.	
	Amount calculated on a percentage basis.	Fixed maximum.		
1	2	3	4	5
10	20 — 60	Rs. 2,813	Rs. 1,000	Rs. 1,400
11	21 — 60	3,150	1,400	1,700
12	22 — 60	3,520	1,800	2,000
13	23 — 60	3,910	2,200	2,400
14	24 — 60	4,320	2,600	2,800
15	25 — 60	4,750	3,000	3,200
16	26 — 60	5,200	3,000	3,350
17	27 — 60	5,670	3,000	3,500
18	28 — 60	6,260	3,000	3,650
19	29 — 60	6,670	3,000	3,800
20	30 — 60	7,200	4,000	4,000

IX.—FAMILY PENSION FUND.

1. The advantages of a compulsory Provident Fund are generally recognized, but the resulting provision for the wife and family in the event of the death of the officer during his term of service is wholly inadequate.

His Honour would therefore be glad to see a Family Pension Fund established on a sound actuarial basis and is of opinion that Government might act generously in this matter but whether Government could afford to pay pound for pound into it must, His Honour considers, be left to the Government of India to determine.

X.—GENERAL.

Present constitution and working of the department.—As regards the new system of recruitment from England the Local Government is of opinion that the recruits hitherto received under this system are on the whole satisfactory, but that a still better class of recruits could be obtained on the lines advocated in section III, paragraphs 3, 4 and 5.

2. As regards recruitment in India the Local Government has already expressed its opinion on the recruits who are now received from Rurki and has made suggestions with a view to securing a better stamp of men, *vide* section III, paragraph 7.

3. As regards the comparative merits of Europeans and Indians, the Local Government has already expressed its opinion in section III, paragraph 1.

His Honour holds strongly to the opinion therein expressed that the European recruited in England is much superior to the Indian in all those essentials of character, business and administrative ability without which technical skill is of little avail and is, as a rule, in addition, superior in technical skill. It will therefore, in His Honour's opinion, be necessary if a reasonably high standard of efficiency is to be maintained to employ a very large proportion of Europeans in the service for a long time to come.

The objections to the employment of temporary Engineers to the extent to which they are employed at present and to the placing of subordinates in charges for which they are not qualified have been stated in section III, paragraph 1, section V, paragraph 4.

4. His Honour would lay emphasis on the present inadequacy of the present staff of Engineer officers.

The Irrigation Commission of 1901-1903 made the following remarks on the necessity for an increase in the Engineering staff:—

"In every province which we have visited, wherever we have taken evidence and made or received any proposals for the extension of works, we have been uniformly met with the complaint of the lack of Engineer officers. We have reason to think that this complaint is well-founded. It has been pointed out to us that the scale which has been sanctioned for each province is insufficient for present requirements; that the actual working strength is generally much below that scale; and that matters are getting worse every year, as, owing to irregular and insufficient recruitment in the past, the number of annual vacancies exceeds the number of new recruits. We have been told not only that the size of divisional charges is much larger than formerly, but also that the Executive Engineers are assisted by a less efficient staff; sub-divisions which used to be held by Engineers of English education being now in charge of subordinates or of Engineers temporarily employed."

"The sufficiency of the strength of the Public Works Department for the current duties which it has to discharge, and the adequacy of the present recruiting arrangement are administrative questions with which we have no immediate concern; and we have not therefore considered these complaints very closely. We cannot however but recognize that the successful prosecution of the programme of new irrigation works which it has been our duty to propose, will largely depend on the maintenance of the personnel of the Public Works Department at an adequate strength; and that, if even only a portion of that programme meets with the approval of Government, it cannot be completed within a reasonable time unless the staff of Engineers be largely increased and a permanent increase will be required for purposes of

APPENDIX VII—continued.

investigation and construction, and also of subsequent maintenance and management. We need not dwell on the fatally wrong policy of spending large sums on new works and grudging the small expenditure necessary for their proper design, supervision, and management."

Although ten years have elapsed since the above opinion was recorded, the number of Engineer officers has not kept pace with the expansion of Public Works such as Irrigation, Sanitation, Water-supply, Roads and Buildings, with the result that the case is even worse now than it was ten years ago and the present staff of Engineers is quite inadequate to cope with the large amount of work it is now required to undertake. As a result of this subordinates have of necessity been placed in the charge of sub-divisions for which they are in very many cases quite unfitted by reason of their status, inferior qualifications and character.

For the same reasons it has been necessary to employ temporary Engineers in charges both divisional and sub-divisional which should be held by permanent men. These temporary men, as a rule, possess poor qualifications and have poor prospects. As a result we now have a considerable body of inferior Engineers, many of whom have been employed for a considerable term of years and who are in consequence not un-naturally discontented.

The great temptations to bribery to which the subordinate staff is open in a large spending department, the inadequacy of the superior supervising staff and the consequent survival of the old bad traditions which our Indian Engineers, with few exceptions, have not shown themselves strong enough to resist, has led to frequent dissatisfaction with the work of the department in recent years and urgently demands an increase in the superior supervising staff.

The Local Government is strongly of opinion that a much stronger and carefully selected proportion of Europeans should be employed in the Public Works Department than is at present the case.

ANNEXURE.

The Public Works Department Provincial Service.

From *Pioneer* of August 14, 1912.

The history of the Provincial service of the Public Works Department ending with its last phase, the resolution of the Government of India of the 15th May, 1912, announcing the sanction of the Secretary of State to the introduction of another revised scheme, is in many respects a curious one. To trace its main features on broad lines, up to the year 1882 the Indian College appointments were open to all comers without any question of domicile in the country or race distinctions; and although there were certain differences in the matter of leave rules and pensions to the disadvantage of those appointed in India all officers of the department drew precisely the same rates of pay. It was free to any candidate to aim at entering the service through the home channel or in India as he might deem it expedient in his own interests. In 1882 the first important change occurred, the Indian College appointments were restricted to Natives of India, that is to Indians and domiciled classes and Europeans were debarred. But not even then was any differentiation in salaries introduced, and all officers, whether Natives of India appointed in the country or Europeans recruited in England, continued to draw salaries on the same scale. Up to 1882 the service attracted not only the cream of European youths educated in India, but also, to some small extent, men from beyond the borders of India, altogether: officers such as Sir William Garstin and Mr. Moylefield were in no sense the products of India or of Indian education, and though Englishmen became ineligible in the subsequent two years the department was still replenished by the best European blood that India could supply. In neither period were the best Indians to the fore as the Engineering profession was not in accordance with their inclinations, prejudices or family traditions.

A still greater change came into force in 1892 when the Provincial service was introduced. It was ostensibly the result of the recommendations of the Public

Service Commission of 1888; but it seems probable that the Government of India or the Secretary of State had previously some idea of reducing the salaries of men appointed in India on the occurrence of a suitable opportunity, in which case the report of the Commission may have given the opportunity sought and have meant little more than that. It is difficult in any other way to account for the manner in which the Provincial Scheme of 1892 was framed. It ignored what seems to have been the main intentions of the Commission in its report, and not altogether without reasons, for the report, it must be admitted, was a somewhat perfunctory affair. Considering the vast importance of the Public Works Department in the future development of India, and the fact that its officer strength was nearly equal to that of the Civil Service and its subordinate establishment larger, it is remarkable that while the subject of the Civil Service received such careful and exhaustive examination, the department should have been dismissed in such few words. And even those few words were peculiar. "The Commission is informed" it was said by one very competent witness "that at present a Coopers Hill man is sometimes kept for fifteen years manufacturing bricks and lime and putting them together." Whether the Commission imagined that Coopers Hill Engineers loaded and fired limekilns with their own hands, pugged brick earth with their own feet, and subsequently performed the duties of a bricklayer is not clear, but, putting it briefly and in its broad sense the above, as a definition, is not a bad description of an engineer's duties. The engineer usually is a man who is putting things together and bricks and lime together may mean large buildings and bridges and important irrigation works. Ballast and mortar together form concrete—concrete and steel together and there is reinforced concrete; a number of bits of steel together and may be a great railway bridge; but to the members of the Commission it was ridiculous that Coopers Hill men should be so employed and they considered it high time that there should be a second rate class of Engineers to relieve them of drudgery. They would not appear to have realized that, although there are details of an Engineer's work for which high qualifications are not essential the department possessed a large subordinate establishment for such purposes.

But if the scheme of 1892 were intended to be independent of the views of the Commission it was unfortunate that it should have been introduced at that particular time; it was only natural that it should have been ascribed to the Commission's recommendations. And it was particularly unfortunate for another reason. The avowed purposes of the Public Service Commission were to arrive at the best means of improving the prospects of Natives of India by opening the road to more of the higher posts of all services to them. The Civil Service in addition to its covenanted officers, possessed a lower Indian appointed establishment whose prospects, by means of a Provincial service, it was possible to advance. The Public Works Department had no such corresponding establishment: its officers were all Imperial, and consequently any Provincial scheme, not confined to the subordinates of the department, must necessarily have entailed a degradation, instead of improvement, on former conditions. The point was one of vital importance, and without a radical change in the composition of the department, there was no way out of it. Something however had to be done and the result was what is known as Sir Charles Elliott's Provincial Engineer Scheme of 1892. The scheme made no provision for a separate engineer establishment, for the less important work of the department, as was apparently contemplated by the Public Service Commission; in fact it might have been framed on orders which said "Never mind the Commission but reduce the pay of the appointment made in India" as if that, and that only were the aim. It merely created a new superior service on the same list as the Imperial men to work side by side with them, only, except in Chief Engineer class, on two-thirds the salary. Except in the matter of pay, the two services were co-equal; and the attempt to give some justification to the scheme by listing the less important charges as provincial proved impracticable. It is sometimes supposed that the "two-thirds" idea originated with

the Commission, but this is an error. Sir Charles Aitchison and his colleagues never touched on the subject of emoluments in their report. Indeed, by a curious irony of fate, the fraction in question appears to have been derived from the analogy of the statutory Civil Service which the action of the Commission may be said to have abolished. It was only natural that such a scheme should have been received with dismay. By 1892 the home recruited engineers were no longer what they were in the early days of the Coopers Hill system. The freely expressed grievances of the senior Coopers Hill men who had been attracted to the service by a very misleading prospectus, had not stopped this source of recruitment altogether; but the supply was no longer of the same class, and rightly or wrongly the Rurki Engineers believed themselves to be the equal of the officers appointed by the Secretary of State. In that frame of mind they bitterly resented working shoulder to shoulder with men on pay so superior to their own, and though the Imperial officers were not directly affected, the scheme came to them as a reflection on the importance of their service, lowering at a blow its status and efficiency. Efficiency in fact was bound to suffer, not only did the scheme introduce into the department a body of engineers thoroughly discontented with their position, but it was not to be expected that the service would be as popular as it was when Rurki produced such officers as Garstin or Willcocks, Field and Macdonald, and others who established a reputation for themselves in India and Egypt. At the transition stage, in spite of the changed conditions, a number of able men doubtless adhered to their intention of embarking on a profession for which they had been destined from an early age; but the average quality of the recruits had a downward tendency. The best Europeans in the country no longer cared to compete, the lists of successful candidates for the guaranteed appointments became almost exclusively Indian and to Indians of the better class the engineering profession had never been attractive. If they entered it was for the sake of some form of government service and on account of the difficulty or impossibility of obtaining other appointments more to their taste, but not from any aptitude or love for engineering. It is possible that many of them were amply paid for what they were worth; but as time went on their numbers increased and with their number the voicing of grievances. The general weal of the service was plainly suffering. It was not that time disclosed any fresh causes for dissatisfaction. The scheme at the end was just what it was known to be at the beginning, but every year brought an accession to the ranks of the malcontents, and after about a decade the Government apparently felt that the position called for reconsideration.

I believe I am correct in saying that the department, then consulted and taken seriously into confidence for the first time, spoke with no uncertain sound. Its members have never been in favour of a Provincial Service. They were of opinion that there was no room for a service of Provincial engineers sandwiched, so to speak, between the Imperial officers and the subordinates, and with scarcely a dissentient voice they condemned the scheme in the form it had assumed. They contended that the pecuniary value of the operations of the department was so great that an inferior Engineer, whatever the economy due to low pay, was a costly servant to the State; that inefficiency was not only an extravagance, it was a positive menace, and the menace was accentuated because the Provincial service was discontented to the core. It is believed that the Railway and Irrigation officers in particular asserted that the Provincial system was unlikely to produce recruits of the stamp required for the important work of these branches of the department; and it was obviously impossible to force the whole Provincial establishment on the Buildings and Roads branch, the proportion of Imperial engineers would be so small that the effect would be disastrous. In short the weight of opinion then expressed pointed to the restoration of the department to its former Imperial conditions in some shape or form or a still greater degree of differentiation in the direction of a Provincial subordinate service. There were many reasons why in the circumstances of the department it should be wholly

Imperial. The magnitude of the interests of Railway and Irrigation in India, the large sums of money spent and earned by these branches, the varied and difficult work of the general branch of the service all point to the necessity for a thoroughly efficient engineer establishment. Moreover, when the accounts branch of the department—with far less responsibility and need of character and initiative, less study to keep abreast of the times, less exposure and isolation and greater comforts and amenities—was being maintained on an Imperial footing, it was anomalous that the engineers should be consigned to a position so inferior to that of their auditors. But if on the other hand the views of the Public Service Commission were sound and it was felt that there was a genuine demand for a second class engineer agency, it would have been consistent to have given practical effect to the belief and to have divided the services in a more wholesale manner. The subordinate establishment was in need of improvement; nothing had been done for it for years, and the opportunity presented itself. In an organization which provided only one Assistant Engineer to each Executive, there was a marked demand for highly trained sub-engineers for the charge of sub-divisions, from which they might rise to divisional charge, if found so qualified. In fact there might have been combinations of the two main systems in various ways, a certain number of the best men being appointed on an Imperial footing and the rest to a Provincial sub-engineer service on admittedly lower salary and status or all appointed to the sub-engineer service with the prospect of transfer to the full emoluments of the Imperial engineer if found so qualified. The task of framing any satisfactory Public Works Provincial scheme, difficult enough at the start, was however rendered still more difficult by the shape the first scheme had taken and the manner in which it had been announced. The long delay was doubtless owing to this reason and while the years were passing another factor urgently affecting the Imperial establishment came into play. A time-scale had been sanctioned for the Opium department in 1906 and was followed by a similar scale of pay for the Enrolled list. The scale for the latter was cast on such generous lines that it was impossible for other Imperial services to remain as they were. The scheme for the Imperial Forest establishment came into force in January 1907 and the Public Works department grew uneasy. Further delay was clearly out of the question and forced by the pressure of events, the reorganisation scheme of 1908 was launched.

It is unnecessary to refer to the Imperial part of it which merely followed the time-scale sanctioned for the Forest department. In the case of the Provincial service, a sort of middle course was adopted. In many respects the prospects of the Provincial engineers were improved, but they were placed on a separate list; and this action coupled with the substantial improvements in the salaries of the Imperial officers, caused more discontent and disaffection than had ever previously existed. As a matter of fact, if the question be examined dispassionately, the separation of the lists, the main feature of the reorganisation of 1908, was not in itself unreasonable. If the Indian college engineers were as well qualified in technical and administrative skill as the home recruits, they were worthy of the same salary; but if the Provincial service had been introduced on account of a need for a lower paid agency for the less scientific work of the department, the complete separation of the two establishments was not only defensible but was common sense. The 1892 scheme was purely arbitrary, here at any rate was some show of principle; it was nevertheless made the special rock of offence. The Provincial engineers, almost in a body, declined to accept the new conditions, accompanied by, what they considered to be, enhanced social degradation and breach of faith. All their earlier memorials had prayed for reinstatement to the Imperial establishment and their hopes were centred in that direction. They knew that the grievances of the department of the past had been largely directed towards equalization of emoluments for all officers, military and civil, doing the same work. The 1892 scheme, with all its disadvantageous disparity of pay had declared that "in all other respects there shall be no distinction between the two services." The inequality of pay to

two sets of officers with the same duties and responsibilities was so marked that the Provincial men had hopes of rectification in the direction without disadvantages in any other. They had not anticipated the separation which dashed their hopes to the ground and their disappointment was unbounded. They felt that in asking for bread, they had received a stone. The discontent was so pronounced that yielding to importunity, Government faced the situation once more, and the result is shown in the recently announced scheme of 1912. The 1912 reorganization resorts to the general lines of the scheme of 1892 and there is again no distinction between the two services except in the matter of pay. The only underlying principle would appear to be that Europeans with a longer and more expensive course of education, serving in a climate prejudicial to their health in a country which means separation from families, and all the other personal and pecuniary disabilities, should be paid on a higher scale than Indians employed in their own country. Indeed the Honourable Mr. Gokhale proposed in Council to give this principle more definite shape. In urging the more extended employment of Indians he suggested that they should be on the same general scale of pay as the Europeans but that the latter should be granted additional personal allowances as compensation for service in a foreign country. The principle may be plausible enough at first sight, but it is very questionable whether it should be admitted. If the future policy of Government should be one of allowing Indians a greater share in the work of their own country when they show themselves fit for it, there is no reason to pay a European engineer higher solely because he is a European. If as an engineer he is no better than the Indian, there is no reason to import him at all. But it is common knowledge that he is better and for the better article it is sound policy to pay the price. Nearly forty years ago a very distinguished Irrigation officer remarked that in the course of his experience he had not known a single native Assistant Engineer worth his pay. He may have been unfortunate and no doubt some progress has been made since that time, but it was only a short time ago that a disinterested observer, Sir Valentine Chirol, wrote: "Until quite recently the educated classes have held almost entirely aloof from any but the liberal professions. Science in any form has been rarely taken up by University students or for every B.Sc. the honours lists have shown probably a hundred B.A.'s. The Indian National Con-

gress itself as it represented mainly these classes naturally displayed the same tendencies, and for a long time it devoted its energies to so-called political problems rather than to practical economic questions. Hence the almost complete failure of the Western educated Indian to achieve any marked success in commercial and industrial undertakings, and nowhere has that failure been more complete than in Bengal, where it would be difficult to quote more than one really brilliant exception." The one exception Sir Valentine refers to is Sir R. N. Mukerjee of Messrs Martin and Co., an engineer and business man of marked ability, and there have been other exceptions, but being exceptions they prove nothing beyond the rule. The fact is no reflection on the brilliant intellects of India because the best intellects of India have never been devoted to engineering science; and to look the question fairly in the face, the men who have entered the profession have not shown themselves conspicuous either in technical knowledge or in those essentials of character and sense of responsibility in emergencies and business and administrative ability, without which technical skill alone is of little avail. There are signs of progress in the right direction even since Sir Valentine Chirol wrote his work on Indian Unrest, but India is a country which moves slowly, and those who are most intimately acquainted with the working of the Public Works department are well aware that any reasonably high standard of efficiency must mean the employment of a very large proportion of European officers for a long time to come, not because they are Europeans, but because the qualifications and aptitude and intense love for the profession have not so far been found in India in appreciable degree. It would have been well if this had been realized at the time the first Provincial scheme was framed. If this scheme created difficulty the difficulty is intensified by that of 1912, the principle on which both are founded is unsound, and the system, under which ten per cent. of the home appointments are given to Indians, without competition with the Europeans, only adds to the inconsistency of the situation. All that can be said is that both parties appear to be satisfied for the time and discontent has been allayed. The Provincial engineers may congratulate themselves on the substantial improvements granted to them, and the Government, in their freedom from adverse criticism at the moment, may feel themselves in the position of the Provincial Mayor who plumed himself on having "held the balance even between right and wrong."

APPENDIX VIII.

Memorandum prepared by the Government of Bengal relating to the Public Works Department.

(1) Present Regulations as to Recruitment, Training, and Probation, and whether these Regulations are satisfactory.—The cadre of the Bengal Public Works Department, as at present sanctioned by the Government of India, consists of 49 Engineer officers. This is divided as follows: 34 Imperial and 15 Provincial.

The recruitment for the Imperial Service is in accordance with the Appendix VIII of the memorandum prepared by the Government of India for the Public Services Commission, 1912.

Each year the number of appointments to be made of Assistant Engineers in the Public Works Department is advertised and applications for the same are invited. Selection is then made in accordance with the advice of the Selection Committee appointed by the Secretary of State.

Every candidate, except natives of India, must be a British born subject of European descent, and at the time of his birth his father must have been a British subject either natural born or naturalized in the United Kingdom.

Natives of India, who are British subjects and are not qualified under the above regulation, are eligible for appointment and shall be appointed to the extent of 10 per cent. of the total number of Assistant Engineers thus recruited, if otherwise duly qualified.

Candidates must produce evidence that they have obtained (1) one of the University degrees mentioned below, (2) passed the A.M.I.C.E. Examination or obtained such other diploma or distinction as may, in the opinion of the Selection Committee, be accepted as approximately equivalent to the degrees mentioned below.

It is further laid down that it is advisable that candidates who have been through a college course should have had at least one full year's practical experience of Civil Engineering under a qualified Civil Engineer. Those who have taken no college course should have had a full three years of such practical experience. If a selected candidate has not, in the opinion of the Selection Committee, had sufficient practical experience, he may be required to undergo, after arrival in India, a year's probation.

List of Degrees.

University of Oxford.—B.A. (in the Final Honours School in Engineering Science).

University of London.—B.Sc. (Engineering).

University of Cambridge.—B.A. Honours (Mechanical Sciences Tripos).

University of St. Andrews.—B.Sc. (Engineering).

University of Glasgow.—B.Sc. (Engineering).

APPENDIX VIII—continued.

University of Edinburgh.—B.Sc. (Engineering).
Victoria University of Manchester (or Victoria University).—B.Sc. (with Honours in Engineering) and B.Sc. Tech. (Honours Division in the Final Examination).

University of Liverpool.—B. Eng., provided the degree be obtained by passing the examinations of the University.

University of Leeds.—B.Sc. in Civil or Mechanical Engineering.

University of Sheffield.—B.E. (First class in Final Examination).

University of Birmingham.—B.Sc. (Engineering) provided that the Engineering Matriculation Examination shall have been passed before entry upon any course of study which forms part of the degree course; and that a regular course of study, occupying not less than three academical years, shall have been pursued between the passing of such Matriculation Examination and the passing of the Final Examination for the degree.

University of Dublin.—B.A.I.

Royal University of Ireland.—B.E. and M.E.

University of Wales.—B.Sc. (in the Department of Civil, Mechanical or Electrical Engineering).

University of Durham.—B.Sc. in Civil, Mechanical, Electrical Engineering or in Naval Architecture, provided that the Matriculation Examination for Engineering and Naval Architecture shall have been passed before entry upon any course of study which forms part of the degree course.

University of Bristol.—B.Sc. in Civil or Mechanical Engineering.

Other degrees.—Any other degree of a University in the United Kingdom which may hereafter be recognised by the Council of the Institution of Civil Engineers as exempting from passing the examination for Associate Membership.

The recruitment for the Provincial Service is from the Sibpur College of Engineering, and the appointment is made in accordance with the following rules:—

One appointment as Apprentice Engineer will be made every alternate year from the regular students who have completed the full course of study in the Civil Engineering branch of the Engineering Department of the Civil Engineering College and have passed the Final Examination, either University or College, held at the end of this course within not more than six academic years of their first admission in the first year class of that college, and who have qualified in the year's practical training in the Public Works Department.

If the Apprentice Engineer serves his apprenticeship satisfactorily, he will permanently be appointed as Assistant Engineer in the Provincial Service of the Public Works Department.

In every fourth year one Upper Subordinate of the Public Works Department will also be appointed as Assistant Engineer in the same service.

The number of regular students of the Civil Engineering branch of the Engineer Department of the Civil Engineering College, Sibpur, who having passed the final College or University Examination held at the end of the college course training will be received for practical training, will be six.

The practical training will be from 1st November to 31st October of the following year.

The Governor of Bengal will select six students who have in the year obtained the Upper Subordinate or Sub-Engineer certificate of the Joint Technical Examination Board and have been trained in one of the following institutions:—

Apprentice Department, Civil Engineering College, Sibpur ... 3

Dacca School of Engineering ... 3

These six candidates will undergo a similar practical training to that of the regular students of the Engineering Department of the Civil Engineering College.

When the practical training is over, a Board of Examiners will be appointed by Government to conduct the practical examination which will be designed to test candidates in those qualities, which, independently of book work and theory, go far to make an efficient officer.

The Board is composed of—
 Superintending Engineer of the Public Works Department ... *President.*
 Executive Engineer ...
 A Professor of the Civil Engineering College, Sibpur ... } *Members.*

The examination is to be essentially a practical one as far as possible conducted orally and in the field. The examination is to be held in the month of November each year.

The following schedules of marks are used at this examination:—

I.—Schedule for competition for guaranteed Assistant Engineer's post.

	Marks.
(1) Handicraft examination ...	500
(2) For marks gained by the candidates in the Engineering and drawing groups of the Civil Engineering branch of the examination held at the end of course of the Engineer Department of the Civil Engineering College ...	1,000
(3) Practical levelling ...	250
(4) Do. Engineering ...	250
(5) Preparation of materials ...	250
(6) Knowledge of simple accounts ...	250
(7) Ability to prepare, use and apply working drawings ...	250
(8) Estimating ...	250
(9) Riding ...	250
Total ...	3,250

II.—Schedule for competition for posts in Public Works Department subordinate grades.

	Marks.
(1) Handicraft examination ...	1,000
(2) Practical levelling ...	250
(3) Do. Engineering ...	250
(4) Preparation of materials ...	250
(5) Knowledge of simple accounts ...	250
(6) Ability to prepare, use and apply working drawings ...	250
(7) Estimating ...	250
(8) Riding ...	250
Total ...	2,750

NOTE.—The standards of the handicraft examination of both the Graduate and the Overseer courses shall be approved for the purposes of this examination by the Public Works Department.

The local Government in reviewing the results will take into consideration the reports on the character and general fitness of the candidates, which are submitted by the officers under whom they have served during their practical training. They will take the marks as awarded under the above Schedule (No. 1) into account in deciding the award of the guaranteed post of Assistant Engineer and will arrange the candidates on the list in order of merit, the first candidate on the list being appointed as Apprentice Engineer to the Bengal Public Works Department Provincial Service in each alternate year.

In deciding the filling of the posts in the subordinate grades, they will prepare a list of merit in a similar way to that described above, making use of the marks awarded in Schedule II.

Those who are ex-students of the Engineer Department of the Civil Engineering College will usually be appointed to the first grade of Overseers, while those who hold the Upper Subordinate or Sub-Engineer certificate of the Joint Technical Examination Board will be placed in the second grade, the Bengal Government showing preference to those trained at Bengal Institutions.

Regarding the method of recruitment, the present method of recruitment for the Imperial Service has so far produced satisfactory results. It is, however, desirable that an Imperial officer of the Public Works Department, selected from the men who are each

APPENDIX VIII—continued.

year on leave in England or officers who have recently retired, should be added to the Selection Committee.

It is also desirable that it should be provided that Provincial Service Engineers may be selected for transfer to the Imperial Service if found of suitable attainments, subject to the condition that the proportion of officers so promoted to Imperial officers otherwise appointed shall never be greater than one to nine.

It is provided in the regulations that 10 per cent. of the total number of Assistant Engineers appointed to the Imperial Services annually shall be natives of India, if duly qualified, and no limit is imposed as to the number of such natives of India who may be selected in any one year. While His Excellency the Governor in Council does not wish to press for a modification of this rule, he holds the view that discretion should be left to the Selection Committee to pick out the best men available for this service and that it is undesirable that this discretion should be fettered by the obligation to appoint a certain number of natives of India should such Indians be qualified under the rules.

Regarding the present system of recruitment for the Provincial Service, the weak point of the present system is that Engineers and subordinates are educated and brought up together, obviously, a very undesirable condition. It would be better in the opinion of this Government if the appointments of the Engineer establishment were made from a college entirely separate from that from which the subordinate establishment is recruited.

The point has been raised for Provincial Engineers that the existing minimum educational qualifications for admission to the Sibpur Engineering College should be lowered so that students may enter the college below the age of 19; this proposal is now being examined by the Bengal Government as there is no doubt that under the present system the Provincial Engineer recruited from Sibpur is placed at a disadvantage when compared with the Imperial recruit as he may enter the department about four years older.

The present system of training and probation appears satisfactory, except that it is desirable that special opportunities should be given to Indian trained Engineers to visit Engineering works outside their country.

(2) The Rates of Pay and Allowances in force in 1890 and 1900 and at the present time, and whether the present Rates of Pay and Allowances are satisfactory.—The rates of pay and allowances are shown in the statement in Annexure A.

Imperial Service.—The Imperial Engineers have represented that their present salaries are inadequate. Although during the last twenty years the salaries of the Engineers of the Public Works Department have been materially increased, there is ground for the objections still raised that, even with the present rate of salaries, it is extremely hard for an officer in the Imperial Service, if married, to save an amount from his salary sufficient to provide for his wife and family after his retirement or on his death. At present the existing Provident Fund merely gives him 4 per cent. on the deposits made in it, and the Bengal Government is inclined to the view that something might be done by the State in the way of a contribution to this Fund, in order to improve the position of Imperial officers generally. This might prove more effective than a readjustment of salaries which might lead to an increase in the general standard of expenditure. The addition by Government of 50 per cent. of the amount thus saved by each officer, subject to proper limitations, would prove a valuable and not extravagant addition to the attractions of this service.

It is further urged that special allowances should be given to European officers of the Imperial Service

stationed in Calcutta. These officers have for some time past felt the hardship of the present conditions, the cost of living for Europeans in Calcutta being at least 50 per cent. higher now than it was 25 years ago. This Government strongly support this proposal and has more than once urged on the Government of India the necessity for such allowances, but so far with no satisfactory result. In the meantime it is increasingly difficult to fill any of the Calcutta appointments in the Public Works Department with European officers, though for the efficient working of the Department it is essential that a portion of these appointments should be so filled.

Provincial Service.—This Government is of opinion that the present rates of pay are satisfactory.

(3) Number of Posts in each Grade and the provision, if any, made in the Cadre for Leave and Training:—

Chief Engineers (one sanctioned temporarily)	2
Superintending Engineers	5
Executive Engineers	18
Assistant Engineers	18
Allowance for absentees	6

(4) Appointment held outside the authorised Cadre:—

- (1) Mr. B. K. Finnimore, Chairman, Improvement Trust.
- (2) Col. Joly de Lotbiniere, State Engineer, Kashmir.
- (3) Mr. A. G. Mafin, Assistant Sanitary Engineer.
- (4) Mr. J. C. Stronach, on deputation to Delhi.
- (5) Babu Jotindra Nath Mallick, District Engineer, Burdwan.

(5) Whether any addition is required to the present Cadre.—Not at present.

ANNEXURE A.

Scale of pay in 1890.

	Rs.	
Chief Engineer—		
1st class	2,500	There was no Provincial Service in 1890.
2nd "	2,000	
3rd "	1,800	
Superintending Engineer—		
1st class	1,600	
2nd "	1,350	
3rd "	1,100	
Executive Engineer—		
1st grade	950	
2nd "	800	
3rd "	700	
4th "	600	
Assistant Engineer—		
1st grade	500	
2nd "	(Rs. 350 rising to after three years)	
3rd grade	400	
	250	

Scale of pay in 1900.

IMPERIAL.	Rs.	PROVINCIAL.	Rs.
Chief Engineer—		Chief Engineer—	
1st class	2,500	1st class	2,500
2nd "	2,000	2nd "	2,000
3rd "	1,800	3rd "	1,800

APPENDIX VIII—continued.

IMPERIAL.		PROVINCIAL.		IMPERIAL.		PROVINCIAL.	
	Rs.		Rs.		Rs.		Rs.
Superintending Engineer—		Superintending Engineer—		Assistant Engineer—		Assistant Engineer—	
1st class ...	1,600	1st class ...	1,050	Year of service:		Year of service:	
2nd „ ...	1,350	2nd „ ...	900	1st ...	380	1st ...	250
3rd „ ...	1,100	3rd „ ...	750	2nd ...	420	2nd ...	275
Executive Engineer—		Executive Engineer—		3rd ...	460	3rd ...	300
1st grade ...	1,000	1st grade ...	650	4th ...	500	4th ...	325
2nd „ ...	850	2nd „ ...	550	5th ...	540	5th ...	350
3rd „ ...	700	3rd „ ...	475	6th ...	580	6th ...	375
Assistant Engineer—		Assistant Engineer—		7th ...	620	7th ...	400
1st grade ...	550	1st grade ...	400	8th ...	660	8th ...	425
2nd „ ...	450	2nd „ ...	350	9th ...	700	9th ...	450
3rd „ ...	350	3rd „ ...	250	10th ...	750	10th ...	475
<i>Present scale of pay.</i>				Executive Engineer—		Executive Engineer—	
IMPERIAL.	Rs.	PROVINCIAL.	Rs.	Year of service:		Year of service:	
Chief Engineer—		Chief Engineer—		11th ...	800	11th ...	535
1st class ...	2,750	1st class ...	2,750	12th ...	850	12th ...	570
2nd „ ...	2,500	2nd „ ...	2,500	13th ...	900	13th ...	605
<i>Local allowance of Rs. 250 is given to Secretaries to Local Government.</i>				14th ...	950	14th ...	640
IMPERIAL.	Rs.	PROVINCIAL.	Rs.	15th ...	1,000	15th ...	675
Superintending Engineer—		Superintending Engineer—		16th ...	1,050	16th ...	710
1st class ...	2,000	1st class ...	1,600	17th ...	1,100	17th ...	745
2nd „ ...	1,750	2nd „ ...	1,400	18th ...	1,150	18th ...	780
3rd „ ...	1,500	3rd „ ...	1,200	19th ...	1,200	19th ...	815
				20th, and fol-		20th ...	850
				lowing years	1,250		

APPENDIX IX.

Memorandum prepared by the Government of Bihar and Orissa relating to the Public Works Department.

(1) **The present Regulations as to Recruitment, Training, and Probation, and whether these Regulations are considered satisfactory.**—There is a separate cadre for the Engineer Establishment of Bihar and Orissa, but recruitment and training are carried out under rules applicable to the establishments of all provinces, and additions to the establishment are arranged by the Government of India.

The Imperial establishment is recruited from selected candidates appointed in England by the Secretary of State with the help of a Selection Committee, and from the Corps of Royal Engineers on the Indian Establishment. The Provincial Service is recruited from passed students of Indian Civil Engineering Colleges and by the promotion of deserving Upper Subordinates. The system of recruitment is fully described in paragraphs 141 to 166 of the Public Works Department Code, Vol. I.

Recruits for the Imperial Service are expected to have had practical experience on works prior to selection by the Selection Committee in England. If the Committee consider the experience gained is insufficient, appointment to the service is made subject to a satisfactory probation in India of one year in charge of works. Recruits from Indian Colleges to the Provincial Service are first appointed as apprentices for one year during which they are trained on works. Their appointment as Assistant Engineers is dependent on their giving satisfaction during their training.

The Local Government have no objection to urge against the present system of recruitment for either service; but they consider that the period of training for one year as "Apprentice," prior to appointment

as Assistant Engineer on the Provincial Establishment, should be abolished in Bihar and Orissa in view of the fact that a preliminary training on works for one year is already required at the conclusion of the College Course before competition for the post of Assistant Engineer. The Apprentice Course, in effect, extends the period of practical training to two years and unnecessarily defers appointment to the Assistant Engineer class. If necessary, appointment as Assistant Engineer may be on probation for one year as in the Imperial Service, in certain cases.

(2) **The Rates of Pay and Allowances in force in 1890 and 1900 and at the present time, and whether the present Rates of Pay and Allowances are satisfactory.**—A statement is attached showing the pay and allowances in force during the years stated. Although there are separate rates of pay for the Imperial and Provincial Services, all officers are borne on one combined list, receiving their increments annually and rising from the Assistant to the Executive class in the same period, viz., in the 11th year of service. The Local Government do not consider that any alteration is required in the existing rules for either service in the classes of Assistant and Executive Engineer, but they think that the incremental system of pay might be extended to the class of Superintending Engineer, now that Superintending Engineers are borne on separate scales for each province. The numbers on each scale being necessarily small, the separation results in a most unequal system of promotion, taking the class as a whole. A suitable incremental scale, retaining the present minimum and maximum, would perhaps be Rs. 1,500 rising to Rs. 2,000 by annual increments of Rs. 100.

APPENDIX IX—continued.

Grades.	Pay.				
	1890.		1900.		1913.
	Imperial and Provincial.	Imperial.	Provincial.	Imperial.	Provincial.
Assistant Engineer, III ...	Rs. 250	Rs. 350	Rs. 250	Rs. 380 rising to 750 in 10th year.	Rs. 250 rising to 475 in 10th year.
Ditto II ...	350—400	450	350	800 in 11th year rising to 1,250 in 20th year.	535 in 11th year rising to 850 in 20th year.
Ditto I ...	500	550	400	(c)	(f)
Executive Engineer, IV ...	600	700	475	(a)	(e)
Ditto III ...	700	850	550	(b)	(d)
Ditto II ...	800	1,000	650	(c)	(f)
Ditto I ...	950	1,250	750	(d)	(e)
Superintending Engineer, III ...	1,100	1,400	900	(e)	(f)
Ditto II ...	1,350	1,600	1,050	(f)	(g)
Ditto I ...	1,600	1,800	1,200	(g)	(h)
Chief Engineer, III ...	1,800	2,000	1,500	(h)	(i)
Ditto II ...	2,000	2,500	1,750	(i)	(j)
Ditto I ...	2,500	2,500	2,500	(j)	(k)

(a) Introduced in 1892. (b) Introduced in 1893. (c) Introduced in 1899. (d) Introduced in 1905. (e) Introduced in 1908. (f) Introduced in 1912.

* In this year, a local allowance of Rs. 250 per month was attached to the post of Secretary to a Local Government and Rs. 150 to that of Secretary to a minor administration in addition to the grade pay of the post on the Engineer Establishment.

(3) **The number of Posts in each Grade and the provision, if any, made in the Cadre for Leave and Training.**—A statement is attached, showing the scale which has been submitted to the Government of India for sanction and the actual number of officers employed against it. The scale is the same as that already provisionally approved by the Government of India with an addition of eight officers (equivalent to 20 per cent.) as a reserve to provide for absentees on leave. No separate provision is made for officers under training. The preliminary training on works considered necessary is acquired before recruits join the Department as Assistant Engineers. For Departmental training, it is the practice to post Assistant Engineers on first appointment at the headquarters of a division so as to give them an opportunity of acquiring a knowledge of the general routine of duty and the system of accounts, and of studying the vernacular.

Name of appointments.	Number in each grade.	
	As existing.	As submitted to India for sanction.
Chief Engineer ...	2	2
Superintending Engineers ...	5(a)	5
Executive Engineers ...	16	17
Assistant Engineers ...	24(b)	15
Provision of Executive and Assistant Engineers for leave.	—	8
Total ...	47	47

(a) Three officiating.

(b) Includes Mr. T. S. Malik and Lieutenant Robson, R.E., who are at the disposal of the Chief Commissioner, Delhi.

(4) **What Appointments outside the authorised Cadre are held temporarily or otherwise by Officers of the various Services.**—The following are

the only Officers who are employed outside the cadre:—

One Government Architect.—This is a special appointment, sanctioned by the Secretary of State, carrying a salary of Rs. 800 rising to Rs. 1,000 in five years. The officer holding the appointment is serving under a special agreement and was selected in England by the Secretary of State. Application has recently been made to the Government of India for two Assistant Government Architects to be recruited in the same manner. These additional officers will be required in connection with the Capital works at Bankipore and a number of other works of magnitude either started or in contemplation.

One Sanitary Engineer.—This is also a special appointment sanctioned by the Secretary of State. The present incumbent was appointed in India on a special agreement which provides for a salary of Rs. 1,200 rising to Rs. 1,400 in five years. It is probable that the development of the Sanitary works of the province will necessitate the employment of one or two Assistant Sanitary Engineers.

Three temporary Engineers.—These officers are appointed in India under the ordinary rules applicable to temporary staff (Public Works Department Code, Vol. I, 109-111). The sanction to their appointment is renewed from year to year as occasion requires. One is serving on Rs. 500, one on Rs. 300 and the other on Rs. 250.

(5) **Whether any addition is required to the present Cadre.**—The present cadre is considered sufficient for the normal requirements of the province. Additional officers will, however, be required during the period the works connected with the new Capital at Bankipore are in progress. It is possible, when the Capital works develop, that it will be necessary to form an additional Circle of Superintendence under a Superintending Engineer who can devote his whole time to the work. The additional temporary staff that will be required can be obtained locally and appointed under the ordinary rules for the employment of temporary staff.

APPENDIX X.

Memorandum prepared by the Assam Administration relating to the Public Works Department.

(1) **The present Regulations as to Recruitment, Training, and Probation, and whether these Regulations are considered satisfactory.**—The Permanent Establishment of the Public Works Department is recruited from the following sources:—

(a) Officers of the Royal Engineers.

(b) Civil Engineers—British subjects trained in England.

(c) Students of the Indian Engineering College and the Subordinate service.

(a) and (b) form the Imperial Engineer Establishment.

(a) are appointed direct by the Secretary of State. (b) are appointed by the Secretary of State with the advice of a Selection Committee which includes at least one eminent representative of the Engineering profession.

APPENDIX X—continued.

The number to be recruited in each year is notified previous to inviting applications.

The appointments are generally made permanent from the date of landing in India in the case of candidates who have had previous practical training.

In the event of any candidate being selected who has not, in the opinion of the Selection Committee, had sufficient practical experience, he is required to undergo, on arrival in India, a year's probation in charge of works, and his final appointment is dependent upon the result of such probation.

(c) form the Provincial Engineering Establishment.

The number of the appointments from the Indian Engineering Colleges is fixed by the Government of India and the appointments of subordinates are made by the Government of India on the recommendation of a Local Government or Local Administration.

The Staff of Engineers for Assam is posted by the Government of India according to the requirements of the province from among those recruited from the above sources.

The present system of recruiting Engineers as judged by its results is satisfactory, but for the existing Provincial Training Colleges from which Provincial Service officers are recruited, a thoroughly equipped central residential training college might with advantage be substituted.

(2) **The Rates of Pay and Allowances in force in 1890 and 1900 and at the present time, and whether the present Rates of Pay and Allowances are satisfactory.**—The following comparative table gives the rate of pay and allowances in force in 1890 and 1900 and at the present time. The present rates of pay and allowances are satisfactory.

	1890.		1900.		At present.	
	Imperial.		Imperial.	*Provincial.	Imperial.	*Provincial.
	Rs.		Rs.	Rs.	Rs.	Rs.
Chief Engineer, 1st class ...	2,500		2,500	2,500	2,750	2,750
Ditto, 2nd " ...	2,000		2,000	2,000	2,500	2,500
Ditto, 3rd " ...	1,800		1,800	1,800	2,000	1,600
Superintending Engineer, 1st class ...	1,600		1,600	1,050	1,750	1,400
Ditto, 2nd " ...	1,350		1,400	900	1,500	1,200
Ditto, 3rd " ...	1,100		1,250	750	1,250	850
Executive Engineer, 1st grade ...	950		1,000	650	1,200	815
Ditto, 2nd " ...	800		850	550	1,150	780
Ditto, 3rd " ...	700		700	475	1,100	754
Ditto, 4th " ...	600		—	—	1,050	707
Assistant Engineer, 1st grade ...	500		550	400	1,000	675
Ditto, 2nd " ...	350		450	350	950	610
	rising to Rs. 400 after 3 years' service.				909	605
					850	570
					800	535
					750	475
					700	450
					660	425
					620	400
					580	375
					540	350
					500	325
					460	300
					420	275
					380	250

* NOTE.—A special increment of Rs. 50 may be granted by the Local Government to a deserving Provincial Service Executive Engineer who, after completion of five years' service on the maximum pay of Rs. 850, is not promoted to administrative rank.

Executive Officers serving in Assam, except in the districts of Cachar, Sylhet and Goalpara, draw the following local allowances:—

	Rs. per mensem.
Assistant Engineers and Executive Engineers (Imperial Service) ...	100
Assistant Engineers and Executive Engineers (Provincial Service) ...	65

Subject to the provision that pay and local allowance shall not exceed Rs. 1,000 and Rs. 615, respectively.

The Chief Engineer and Secretary to the Local Administration draws a local allowance of Rs. 150 per mensem and the Under-Secretary to the Local Administration draws a local allowance of Rs. 100 per mensem.

(3) **The number of Posts in each Grade and the provision, if any, made in the Cadre for Leave and**

Training.—The number of posts which the Government of India has recommended to the Secretary of State for Assam is 21, comprising 1 Chief Engineer, 1 Superintending Engineer, 10 Executive Engineers, and 9 Assistant Engineers. In this number provision has been made for leave and training.

(4) **What Appointments outside the authorised Cadre are held temporarily or otherwise by Officers of the various Services.**—The following temporary appointments outside the authorised cadre are held by Temporary Engineers:—One post of Executive Engineer on Rs. 750 with a local allowance of Rs. 100, and two posts of Assistant Engineers on Rs. 250 each with a local allowance of Rs. 65 each.

(5) **Whether any addition is required to the present Cadre.**—One more Executive Engineer for dealing with sanitary projects is required in addition to the proposed cadre, and this is now under consideration by the Government of India.

APPENDIX XI.

APPENDIX XI.

Note, dated 21st April, 1913, by the Honourable Sir Archdale Earle, K.C.I.E., Chief Commissioner of Assam, on the Public Works Department.

THE IMPERIAL SERVICE.

Recruitment.—The principles which I have advocated in connection with other services are (1) that Indians required to fill important posts should, for the most part, be recruited direct to the superior service along, and on equal terms, with their European confrères, and (2) that while the door should be left open for the promotion of exceptional locally-recruited officers, too great reliance should not be placed on this method of recruitment to the superior service. The Public Works Department is peculiarly constituted in that, though it admits of the direct recruitment of 10 per cent. of Indians to the Imperial Service, it also recruits locally for superior posts, but on a lower rate of pay. It shows the latter, locally-recruited (provincial service), officers on the same list as the officers recruited by the Secretary of State, an arrangement which I cordially approve. The Department is peculiar also in that it has a Subordinate Service, which does not quite correspond with other Subordinate Services, inasmuch as the salaries of the higher posts correspond rather with those of members of the provincial services than with those of members of the subordinate services of other departments.

2. Inasmuch as these arrangements were sanctioned quite recently (1912), they may perhaps be left alone for a time. Personally, however, I should much prefer to see all officers required for superior posts recruited on precisely similar terms, it being a condition that officers recruited locally should undergo such a training as would bring them up to the standard of those recruited in England. At present the locally-recruited officer is supposed to be on a par professionally with his confrère of the superior service, but I gather that, in fact, he is not. If he were what he is supposed to be, I consider that he should get the same pay. In any case, it seems to me highly anomalous that an officer of such outstanding merit as to be specially selected for an important post like that of Superintending Engineer should, if locally recruited, get less pay than officers recruited direct.

3. **Recruitment of Indians to the Imperial Service.**—The only other remark which I have to make as regards recruitment is that Indians recruited direct should, as far as possible, be residents of the province to which they are posted. As I have stated in connection with the Indian Civil Service, it is for many reasons, administrative, personal and political, desirable that officers should usually be posted to their own province.

4. **Training.**—If, as I have proposed in connection with the Indian Civil Service, a special training institution is established in England for recruits to that service, I trust that the question of providing a training in the same institution for engineers destined to serve in India may be borne in mind. Apart from the great advantage that would accrue from association between European and Indian officers and with recruits for other services in India, the candidates selected for the Public Works Department would be trained specially for work in India, and I consider that such a training would have a very decided advantage over the present system, the general trend of which is towards English practice and results in new recruits being at sea for some time after their arrival in India. Special training in the direction of Indian needs would result in economy.

The training which I advocate above is in respect of recruits selected on their qualifications as at present, the object of the training proposed being directed solely towards Indian needs. This training need not exceed one year. If, in addition, any training in India is considered necessary, this should not be at the expense of the training in England, which I consider most desirable in the general interests of European and Indian officers.

5. **Pensions.**—Imperial Service officers have, I understand, submitted memorials on the subject of their pensions and leave allowances, but I am not in a position to say anything in regard to this matter, as I have not seen the memorials.

THE UPPER SUBORDINATE SERVICE.

1. As noted above, this service corresponds roughly with the Provincial services of other departments. The pay of the service is as shown in the footnote.*

Since these rates were fixed in 1864, not only has the training become more rigorous, but the duties have increased in importance and the responsibilities have become much greater, while the cost of living has advanced very considerably. I would therefore introduce the following combination of grades and time-scale. The lowest grade would be on Rs. 100—200, the second grade on Rs. 200—350, and the highest grade on Rs. 350—550. Following the proportions laid down in rule 62 of the Public Works Department Code, Volume I., three-sixteenths of the total cadre would be in the first grade, five-sixteenths in the second grade, and the remainder in the lowest grade. The usual allowances for holding charge of a sub-division should continue.

2. Experience, however, shows that a considerable percentage of Upper Subordinates prove worthless after a few years, and that others from physical and other causes deteriorate hopelessly at a later stage, and I would, therefore, with the improvements proposed, empower Local Governments to dispense with the services of such men at any period during the first 10 years of their service with a month's pay for each year of completed service, and to retire them compulsorily at a later period on a pension equivalent to that which they would receive if retired on a medical certificate of ill-health.

3. All increments should be subject to stoppage for repeated bad work, and promotions to the Rs. 350—550 grade should be by selection. Officers not promoted to the Rs. 350—550 grade should be eligible for two special quinquennial increments of Rs. 25 for approved service.

4. Upper Subordinates have recently voiced a grievance with regard to their designations, and have asked that their service shall be known as the "Deputy Engineer Establishment," and that they shall be called Deputy Engineers and Assistant Deputy Engineers. I am unable to recommend these requests, as the designations proposed, besides being quite inappropriate in the case of officers performing the functions of an Overseer, would cause confusion by adding to the already long list of names, such as Chief, Superintending, Executive, Assistant and District Engineers. The term Supervisor might, however, be abolished, and the proposed grade of Rs. 100—200 be termed the "Overseer grade," and the two higher grades the "Sub-Engineer grades," while the service might appropriately be designated the "Sub-Engineer and Overseer Establishment."

THE LOWER SUBORDINATE SERVICE.

The standard of education for admission to the colleges is much the same as for Upper Subordinates, but the period of training—theoretical and practical—only lasts two years. The training is of a considerably higher standard than was the case when the present rates of pay were fixed. The service is divided into three grades on Rs. 30—35, Rs. 35—45, Rs. 50—70. Two further special increments of Rs. 10 can be given to officers of approved service in the first grade. These rates are palpably inadequate to secure either honesty or contentment.

	Rs.
* Overseer III ...	60
" II ...	80
" I ...	100
Supervisor II ...	150
" I ...	200
Sub-Engineer III ...	250
" II ...	300
" I ...	400

with increments of Rs. 50 after 5 and 15 years' approved service in grade I.

APPENDIX XI—continued.

and I would raise the pay of the grades to Rs. 45, Rs. 60, and Rs. 75. Officers rendering approved service would be eligible for two quinquennial increments of Rs. 5 in each of the two lower grades, and for four quinquennial increments of Rs. 10 in the highest grade. Government should reserve the right of dispensing with the services of inefficient officers on terms similar to those proposed above in the case of the Upper Subordinate Service.

GENERAL.

Obliteration of unnecessary distinctions in nomenclature.—As in the case of the Indian Civil Service, I advocate that there should be a single Public Works Department list, showing by Divisions (1) the officers of the at present so-called Imperial Service, (2) the at present so-called Upper Subordinate Service officers, and (3) the at present so-called Lower Subordinate Service officers.

APPENDIX XII.

Memorandum prepared by the Government of Burma relating to the Public Works Department.

(1) The present Regulations as to Recruitment, Training, and Probation, and whether these are considered satisfactory.

RECRUITMENT.

Imperial Engineer Officers.

(a) From Royal Engineers.—No appointments made since 1890. No Royal Engineer Officers at present in Burma.

(b) From Officers appointed by the Secretary of State from the Royal Indian Engineering College, Cooper's Hill.—Recruitment from this source ceased in 1906.

(c) From Officers appointed by the Secretary of State after nomination by the Selection Committee of the India Office.—The first appointments of Assistant Engineers from this source were made in 1902.

(d) Officers appointed direct by the Secretary of State.

(e) Officers appointed in India who were not admitted into the Department as Statutory Natives of India.

(f) Officers appointed in India in and after 1886 who were admitted into the Department as Statutory Natives of India.

European Officers, whether of Indian domicile or not, appointed from Indian Colleges prior to 1885-86, form class (e), while officers appointed in 1885-86 and after belong to class (f).

In Burma four officers come under this latter class.

Provincial Service Engineer Establishment.

(a) From Students of Indian Colleges (Statutory Natives of India).

(b) From Upper Subordinates of the Public Works Department.

Upper Subordinates.

(a) From the Thomason Civil Engineering College, Rurki. Up to 1895 this was the principal source of recruitment. Now one appointment is made in every alternate year.

(b) Rangoon (Insein) School of Engineering.—Opened in 1895. One guaranteed appointment yearly as Overseer, 3rd grade.

(c) From the Lower Subordinate Staff.—One appointment yearly. Vacancies remaining after the guaranteed appointments have been made may be filled by the Local Government from any source desired.

Lower Subordinates.

(a) From the Thomason Civil Engineering College, Rurki.—Principal source of recruitment till 1895.

(b) Rangoon (Insein) School of Engineering.—Five guaranteed appointments yearly since 1895. One Sub-Overseer has risen to the Provincial Engineer Establishment.

(2) Imperial.—During the existence of the Royal Indian Engineering College, Cooper's Hill, the number of appointments reserved for Natives of India was limited to two each year. Since 1886-87 only one Indian from this Institution has been appointed to the Public Works Department in Burma. No Natives of India were appointed during the previous 10 years.

After the abolition of Cooper's Hill in 1906 it was ruled that Natives of India who are British subjects are eligible to the extent of 10 per cent. of the total annual number of Assistant Engineer appointments. So far from 25 to 30 Assistant Engineer appointments have been made annually, but, despite the increase in favour of the Natives of India, no Native of India or Burman has been appointed to this Province in the Imperial Branch of the Department.

Provincial.—Is open to Statutory Natives of India and is recruited mainly from the Indian Colleges. Between 1892 and 1912 the percentage of Indians in Burma has been—Burmans 3.45, Natives of India 13.8, total 16.53. Numerically this comes to 1 Burman and 4 Natives of India, total 5; two were promoted from the Upper Subordinate Class and three recruited from Indian Colleges.

Upper Subordinates.—The percentage of Indians recruited since 1886 has been—Burmans 25, Natives of India 42.65, total 67.65.

During the previous 10 years the percentages were—Burmans 3.9, Natives of India 29.4, total 33.3.

Lower Subordinates.—Almost entirely composed of Indians.

(3) Imperial Service.—Present regulations are satisfactory, but it is considered necessary that each recruit should have an Honours Degree or Diploma of some recognised Engineering College and be nominated by the Principal of the College, who should submit to the Selection Committee a confidential report on the general character and special qualifications of each candidate nominated by him.

Special attention should be given to the general character and social qualifications of the candidates in order to maintain the high standard of the Department.

At least one-third of the members of the Selection Committee should be senior officers of the Public Works Department either still on the active list or only recently retired.

The number of Natives of India admitted to the Imperial Service should be limited and it is suggested that this be fixed at 10 per cent.

Provincial Service.—If the Provincial Service is to remain as at present constituted the method of recruitment is considered satisfactory, but exception may be taken to the existing system of appointing two apprentices from the Rurki College to a province where only one obtains an appointment. It is often not possible to place the two apprentices under the same officer for the period of probation and consequently it is very difficult to judge between the respective merits of the two apprentices. This system, it is considered, should be abolished and only those students who have gained the guaranteed appointments should be sent out as apprentices.

TRAINING AND PROBATION.

(a) Imperial Service.—It is understood that candidates to be eligible for promotion are required to have undergone a year's training on works after passing through their College course, but as the conditions of work in England and India are so very different this training is not of much practical use and should not be insisted on, but, whenever possible, the selected candidates should have a year's training on works

APPENDIX XII—continued.

in India in order to pick up the methods of work and accounts, as well as the Vernacular.

It is not considered advisable to introduce a period of probation after appointment owing to the practical difficulty of making such a safeguard an effective one, while its introduction might have an adverse effect on recruitment. In lieu of the period of probation it would be better to have the Professional Examination (Public Works Department Code, Vol. I, para. 167) made more difficult and of a real practical

character which should be passed within three years of joining. Any failure to pass within this period to lead to stoppage of increment, permanent supersession, and possibly forfeiture of appointment.

(b) Provincial Service.—All recruits have to undergo a year's training on probation which is considered suitable and on appointment to Assistant Engineer are subject to the same rules as the Imperial Service with regard to passing the Professional and Vernacular examinations.

(2) Rates of Pay and Allowances in force in 1890, 1900, and at the present time, and whether the present Rates of Pay and Allowances are satisfactory.

Note.—Figures in *italics* indicate changes made.

1. Imperial Engineer Officers.							2. Provincial Service Engineer Establishment.				
Rank.	1886-87.	1893.	1900.	1905.	8th March 1908.	May 1912.	Rank.	July 1892.	1893.	8th March 1908.	Present.
	Rs.	Rs.	Rs.	Rs.	Rs.			Rs.	Rs.	Rs.	Rs.
Chief Engineer:							Chief Engineer:				
1st class ...	2,500	2,500	2,500	(b) 2,750	2,750		1st class ...	2,500	2,500	2,750	2,750
2nd class ...	2,000	2,000	2,000	2,500	2,500		2nd class ...	2,000	2,000	2,500	2,500
3rd class ...	1,800	1,800	1,800	Abolished	—		3rd class ...	(c) 1,800	(c) 1,800	—	—
Superintending Engineer:							Superintending Engineer:				
1st class ...	1,600	1,600	1,600	2,000	2,000		1st class ...	1,050	1,050	1,600	1,600
2nd class ...	1,350	1,350	1,400	1,750	1,750		2nd class ...	900	900	1,400	1,400
3rd class ...	1,100	1,100	1,250	1,500	1,500		3rd class ...	750	750	1,200	1,200
Executive Engineer:							Executive Engineer:				
1st grade ...	950	(a) 1,000	(a) 1,000	(a) 1,000	—		1st grade ...	650	650	—	—
2nd grade ...	800	850	850	850	—		2nd grade ...	550	550	—	—
3rd grade ...	700	700	700	700	—		3rd grade ...	475	475	—	—
4th grade ...	600	—	—	—	—		4th grade ...	400	—	—	—
Assistant Engineer:							Assistant Engineer:				
1st grade ...	500	550	550	550	—		1st grade ...	350	400	—	—
2nd grade ...	350	400	450	450	—		2nd grade ...	250	350	—	—
							3rd grade ...	—	250	—	—
							Engineer Student.	100	100	100	100
							Assistant Engineer:			Max. Pay.	
3rd grade ..	250	350	350	850	—		1st year ...	—	—	250	250
Apprentice Engineer.	100	100	100	100	100		2nd year ...	—	—	250	275
Assistant Engineer:					Max. Pay.		3rd year ...	—	—	300	300
1st year ...	—	—	—	—	350		4th year ...	—	—	300	325
2nd year ...	—	—	—	—	420		5th year ...	—	—	350	350
3rd year ...	—	—	—	—	460		6th year ...	—	—	350	375
4th year ...	—	—	—	—	560		7th year ...	—	—	400	400
5th year ...	—	—	—	—	540		8th year ...	—	—	400	425
6th year ...	—	—	—	—	580		9th year ...	—	—	450	450
7th year ...	—	—	—	—	620		10th year ...	—	—	450	475
8th year ...	—	—	—	—	660		11th year ...	—	—	500	—
Executive Engineer:							12th year ...	—	—	500	—
9th year ...	—	—	—	—	700		13th year ...	—	—	550	—
10th year ...	—	—	—	—	750		14th year ...	—	—	550	—
11th year ...	—	—	—	—	800		15th year ...	—	—	550	—
12th year ...	—	—	—	—	850		Executive Engineer:				
13th year ...	—	—	—	—	900		16th year ...	—	—	650	—
14th year ...	—	—	—	—	950		17th year ...	—	—	650	—
15th year ...	—	—	—	—	1,050		18th year ...	—	—	700	—
16th year ...	—	—	—	—	1,050		19th year ...	—	—	700	—
17th year ...	—	—	—	—	1,100		20th year ...	—	—	750	—
18th year ...	—	—	—	—	1,150		21st year ...	—	—	750	—
19th year ...	—	—	—	—	1,200		22nd year ...	—	—	800	—
20th year ...	—	—	—	—	1,250		23rd year ...	—	—	800	—
							24th year ...	—	—	850	—
							25th year ...	—	—	850	—
							26th year ...	—	—	900	—
							11th year ...	—	—	—	535
							12th year ...	—	—	—	570
							13th year ...	—	—	—	605
							14th year ...	—	—	—	640
							15th year ...	—	—	—	675
							16th year ...	—	—	—	710
							17th year ...	—	—	—	745
							18th year ...	—	—	—	780
							19th year ...	—	—	—	815
							20th year ...	—	—	—	(d) 850

(a) Two periodical increments of Rs. 50 per mensem were allowed at the end of 4 and 8 years, respectively, for approved service.

(b) A local allowance of Rs. 250 per mensem was attached to the post of Secretary or Joint Secretary.

(c) Abolished in 1905.

(d) A special increment of Rs. 50 per mensem may be granted by the Local Government to a deserving Executive Engineer who, after completion of 5 years' service on the maximum pay of Rs. 850, is not promoted to Administrative rank.

APPENDIX XII—continued.

3. Upper Subordinates.

Civilians.		Military.
Rank.	Consolidated Salary.	
Sub-Engineer:	Rs.	Military Subordinates were allowed Staff salaries of their grade in addition to the pay and allowance of their Military rank, but it was stipulated that when the Military pay and allowances of a European Military Subordinate, together with his Staff salary, were exceeded by the Civil consolidated pay of the grade he held his staff pay was to be increased by so much as would make his total pay equal to the Civil pay of his grade. The effect of this rule was to place European Members of the Upper Subordinate Staff on consolidated rates of pay. Recently, however, it was ruled that soldiers entering the Public Works Department after the 14th July 1910, were to draw the Civil rate of pay of the grade to which they may be appointed, ordinarily that of Overseer, 1st grade. Soldiers who were undergoing a theoretical course in a Civil Engineering College on the 14th July 1910, would, in the event of their passing their final examination, be permitted to enter the Public Works Department under the rules in force at the time they joined the College.
1st grade ...	400 (a)	
2nd grade ...	300	
3rd grade ...	250	
Supervisor:		
1st grade ...	200	
2nd grade ...	150	
Overseer:		
1st grade ...	100	
2nd grade ...	80	
3rd grade ...	60	

(a) Allowed 2 increments of Rs. 50 per annum each for long and meritorious service, the 1st after 5 years and the 2nd after 10 years in the grade.

Remarks.—In order to improve the social status of Civil Upper Subordinates the Government of India have permitted Local Governments to confer on Sub-Engineers the Honorary rank of Assistant Engineer. Limited to 6 per cent. of the total Civil Staff of Upper Subordinates in each list, with the addition of 1 for any fraction.

All Civil Sub-Engineers are classed as gazetted officers.

4. Lower Subordinates

Rank.	Minimum.	Maximum.
Sub-Overseer:	Rs.	Rs.
1st grade ...	50	70
2nd grade ...	35	45
3rd grade ...	30	35

Remarks.—Lower Subordinates may be permanently appointed or promoted at any time to any rate of pay that may be deemed appropriate so long as the maxima and minima limits are observed.

Imperial Service.—The present incremental scale of salaries is considered sufficient to attract the kind of officer required and has its advantages over the old system of graded salaries, but has one great disadvantage in that it is laid down that an officer may not draw more than Rs. 800 per month unless he is in charge of a division or in a charge which is considered as of equal importance. This is unjust to an officer who, though fully qualified, does not obtain a division because there happened to be none vacant. It is considered this rule should be amended and an officer who has been recommended as capable of holding charge of a division should draw his increments irrespective of his being in divisional charge.

After the 20th year of service an Executive Engineer draws Rs. 1,250 per month and increments cease. It is suggested that if, on completing 23 years' service, an Executive Engineer is not promoted, though fully qualified, to Superintending Engineer he should be given a personal allowance of Rs. 150 a month and draw the same until promoted to administrative rank. It also appears unnecessary to have two grades of Chief Engineers and it hardly seems fair that a Chief Engineer who is Secretary to a Local Government should draw Rs. 250 a month extra while one who is Secretary to a Local Administration should only draw Rs. 150. The work of Chief Engineers is the same and it is an anomaly that a Chief Engineer in one province should draw more than a man, probably his senior, in another province differently constituted. It is considered that it would be better to have only one class of Chief Engineer on a fixed salary of Rs. 3,000. There were three grades, but these have been reduced to two and may well be reduced to one. Under existing rules Burma allowance of Rs. 100 is not allowed to Executive Engineers drawing a salary of over Rs. 1,000 a month, whereas in the Forest Department all Deputy Conservators draw an allowance of Rs. 100 respective of the amount of their salary, and it is considered the same procedure should apply to the Public Works Department, i.e., all Executive Engineers drawing salaries of Rs. 1,050 to Rs. 1,250 should be granted a Burma allowance of Rs. 100.

Provincial Service.—The Service as now recruited is practically confined to Natives of India and promoted Upper Subordinates, and consequently the present rate of pay is considered ample, but so long as the present College-trained European and Eurasian element, recruited in the past, remains in the Service there is sure to be discontent, and it is considered that this discontent can be removed by promotion of selected officers to the Imperial Service. Also that when an officer is promoted to the administrative grade he should draw the same salary as an Imperial Service Officer, viz., Rs. 1,500, Rs. 1,750 and Rs. 2,000 instead of Rs. 1,200, Rs. 1,400 and Rs. 1,600 in the 3rd, 2nd and 1st Classes of Superintending Engineers.

APPENDIX XII—continued.

(3) Number of Posts in each Grade, and provision, if any, made in the Cadre for Leave and Training.

Particulars.	1887.	26th June 1888.	September 1889.	November 1890.	1891.	1st April 1894.	1894 (later)	July 1897.	December 1898.	November 1899.	29th March 1904.	February 1905.	January 1906.	1911.	Present sanctioned Cadre.	Remarks.
Chief Engineer and Secretary.	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	Chief Engineer and Secretary. Chief Engineer and Joint Secretary. Includes the Sanitary Engineer.
Superintending Engineers.	1	3	(d) 3	3	4	(f) 5	5	5	5	5	5	7	7	7	7	
Superintendents of Works.	1	...	(d) 1	1	...	...	...	...	...	...	...	...	...	...	...	
Executive Engineers.	37	52	58	61	82	82	30	26	26	52	52	61	62	62	42	Includes 1 for the Andamans.
Assistant Engineers.	...	...	...	...	...	...	30	25	25	...	...	...	...	...	41	
Absentees.	...	...	...	...	...	...	12	11	11	11	11	11	11	11	...	
Temporary Staff.	...	...	...	...	...	...	10	10	10	10	10	10	10	10	...	
Upper Subordinates.	78	78	78	78	92	(g) 96	96	96	(i) 78	78	(j) 95	96	97	(m) 118	97	Includes 1 for the Andamans. Supernumeraries.
Lower Subordinates.	(a)	(a)	(a)	(a)	(a)	...	...	...	...	...	...	...	...	...	...	
Grand Total ...	(b) 118	(c) 134	141	144	(e) 179	184	(h) 184	174	156	157	175	(k) 187	(l) 189	210	210	Exclusive of special officers.*

(a) This Establishment is regulated by a money-limit. The fluctuations since 1887 are shown below:—

	1887.	1889.	1893-99.	1904.	1905.	1909.	1910.	Present limit.
Permanent Lower Subordinates ...	Rs. 45,000	Rs. 50,000	Rs. 80,000	Rs. 90,000	Rs. 1,05,000	Rs. 1,05,000	Rs. 1,05,000	Rs. 1,05,000
Temporary Lower Subordinates ...	31,000	34,000	31,000	10,000	45,000	95,000	1,05,000	1,05,000

(b) Prior to April 1887, Public Works in Upper Burma were carried out by Royal Engineer Officers attached to the Field Force, assisted by certain Officers and Subordinates of the Provincial Establishment from Lower Burma.

(c) With the abolition of the Field Force on the 1st April 1887, Upper Burma was constituted a separate Public Works charge under a Superintending Engineer and Secretary, with headquarters at Mandalay. This arrangement continued till Upper and Lower Burma were amalgamated on the 26th June 1888, and the combined charge placed under the control of one Chief Engineer and Secretary, with headquarters at Rangoon.

(d) Three Circles of Superintendence were found to be insufficient to control the large and scattered operations of the Province; a fourth Circle was therefore added and the Cadre revised.

(e) Cadre again increased consequent on the extension of Public Works operations and to a number of Engineer Officers being employed in the preparation of irrigation projects.

(f) Irrigation Circle formed.

(g) Increased in consequence of Military Works in Mandalay and Rangoon having been taken over by the Public Works Department.

(h) Re-adjusted by the Government of India when revising the Cadres of the several Lists of the Engineer Establishment for submission to the Secretary of State.

(i) Reduced to compensate for an increase in the number and cost of the Lower Subordinate Establishment, as men of the latter class were much needed.

(j) Owing to the large increase in the grant for Public Works, the figure was revised again.

(k) Consequent on the appointment of a Second Chief Engineer for the Province, the raising of the appointment of the Sanitary Engineer to a Superintending Engineership and the establishment of the Toungoo Circle of Superintendence the Cadre was increased as shown.

(l) Increased by one Engineer and one Upper Subordinate to provide an Officer and an Upper Subordinate for the Andamans.

(m) Increase in Upper Subordinates due to the Public Works Department taking over District and District Cess Fund Works.

* SPECIAL OFFICERS.

1. *Assistant Secretary.*—In 1903 sanction was obtained to the temporary appointment of a non-professional Assistant Secretary in the Public Works Department on Rs. 550. Subsequently made permanent on Rs. 550—10—750, with effect from the 1st January 1904.

2. *Consulting Architect.*—In 1905 sanction was obtained to a special appointment of Superintending Engineer Architect for a period of 3 years, with effect from the 18th October, 1905, in order to expedite the architectural work of the Province. Subsequently extended to the 5th February 1909. In 1911 the appointment of a Consulting Architect to the Government of Burma, a non-pensionable appointment, was sanctioned to replace that of the Superintending Engineer Architect. The pay of this appointment is Rs. 800—50—1,000.

3. *Electrical Inspector.*—In 1905 sanction was also obtained to the appointment of an Electrical Inspector on Rs. 600 per mensem, for a period of 3 years. This appointment has since been made permanent, non-pensionable on Rs. 600—40—1,000 with a local allowance of Rs. 100 per mensem.

It is considered that the proportion of Assistant Engineers to Executive Engineers should be increased so as to allow each division an Assistant Engineer and the more important divisions two or more Assistants. In Bengal, United Provinces, Bihar and Orissa, Assam and Central Provinces the average excess of Assistant over Executive Engineers is nearly 21 per cent. and if 20 per cent. was allowed for Burma it would not be excessive.

Provision for Leave.—At present fifteen absentees are allowed out of ninety-two officers on the cadre, i.e., a percentage of sixteen nearly. This allowance is considered sufficient.

Provision for Training.—No provision is made. Engineer students of the Provincial Service under-

going a year's practical training do not reckon against the sanctioned cadre until promoted to Assistant Engineer. No provision is considered necessary unless the recruits to the Imperial Service are put on to a year's course of practical training after arrival in India.

(4) What Appointments outside the authorised Cadre are held temporarily or otherwise by Officers of the various Services.

Two such appointments are held at present, viz., Mr. C. G. Barnett, Executive Engineer, at Delhi; and Mr. A. P. Morris, Assistant Engineer, as Headmaster, Government School of Engineering, Insein. Mr. C. J. Homer, Sub-Engineer, has been offered the post of

Assistant Engineer in the Provincial Service and if he accepts, his name will have to be included as he is on deputation under the Government of Bombay.

(5) Whether any addition is required to the present Cadre.

The present cadre is undoubtedly not sufficient for the duties to be carried out by the Department. The present numbers are not sufficient for privilege leave vacancies with the consequence that leave has frequently to be refused owing to there being no relieving officer available. Sanitary work is increasing very largely and special assistants are necessary. A division with one Executive Engineer and two Assistant Engineers is shortly to be formed for work on the frontier north of Myitkyina, and another division will

probably have to be formed out of the present Mandalay and Meiktila Divisions where work has increased and present charges are reported to be very heavy.

The present cadre of Executive Engineers should therefore be increased by two, making it 44, and allowing 20 per cent. excess. For Assistant Engineers the cadre should be revised and increased to:—

Chief Engineers ...	2
Superintending Engineers ...	7
Executive Engineers ...	44
Assistant Engineers ...	53 (44+9).
Total ...	106

instead of 92 as at present, i.e., an increase of 14.

APPENDIX XIII.

[Referred to in paragraphs 71,493 (Mr. Rose's evidence); 72,160 (Mr. Dorman's evidence); 72,252 (Mr. Howley's evidence); and 72,588 (Mr. Harrison's evidence).]

Memorials submitted by Engineers of the Public Works Department to the Viceroy and to the Secretary of State for India.

Purport of Memorials submitted by Engineers of the Public Works Department in 1907-08.

TO HIS EXCELLENCY THE RIGHT HONOURABLE THE EARL OF MINTO, P.C., G.M.S.I., G.C.M.G., G.C.I.E., Viceroy and Governor-General of India.

The humble Petition of A.B. ... Engineer, Public Works Department, India.

SHOWETH,

1stly.—That in consequence of the fall in the purchasing value of gold, the pension which your petitioner can earn under the present rules will not enable him to live in England on retirement in that condition of life in which he was brought up, and in which men of his social standing live.

2ndly.—That your petitioner is unable to save any considerable sum from his pay owing to the high and constantly increasing cost of living in this country.

3rdly.—That the pension which your petitioner can earn compares very unfavourably with the sterling pensions now granted to officers of the other Scientific Services in India, men who are of the same social standing and who have had a similar expensive scientific education.

4thly.—That it appears from Article 641 of the Civil Service Regulations that retiring pensions are intended to be half the officer's average emoluments, but actually, owing to the maxima fixed, they are very much less than half, and could only be half if the officer had been stopped all promotion for many years.

5thly.—That at present there is no increase in pension for length of service beyond 25 years.

(For officers appointed since 1898.)—6thly.—That your petitioner is barred from earning the extra pension of Rs. 2,000 given to Chief Engineers or of Rs. 1,000 given to 2nd and 3rd class Superintending Engineers for 3 years' service as such, if those officers were appointed in or before 1898.

YOUR PETITIONER THEREFORE PRAYS—

That pensions may be granted according to the scale given below, and that they may be paid in England in sterling, at an exchange rate of 10 rupees to the pound sterling.

After 20 years' service, Rs. 4,000 in India or £400 in England.

After 25 years' service, Rs. 5,000 in India or £500 in England.

After 30 years' service, Rs. 6,000 in India or £600 in England.

Additional pension for 3 years' service as Superintending Engineer, Rs. 1,000 in India or £100 in England.

Additional pension for 5 years' service as Superintending Engineer or Chief Engineer combined, Rs. 2,000 in India or £200 in England.

Additional pension for 3 years' service as Chief Engineer, Rs. 2,500 in India or £250 in England.

Memorial of 1912.

To

THE MOST HON'BLE,
THE MARQUIS OF CREWE, K.G.,
His Majesty's Secretary of State for India.

The humble petition of.....Engineer, Public Works Department, India.

SHOWETH,

That your petitioner is an Engineer of..... year's service in the Imperial Branch of the Public Works Department, and that a few years ago His Excellency the Viceroy and Governor-General of India was approached with a humble petition for an increase in the amount of pension to which an officer in your petitioner's service becomes entitled on retirement, no final reply has been received.

That since this petition was presented, despite the improvement in salary graciously accorded by His Majesty's Government in 1908, the continued increase in cost of living in India, and the steady rise in prices in England, have caused your petitioner grave anxiety as to his future on retirement, and induce him to lay his case before your Lordship.

That the increased cost in living to which your petitioner has alluded, renders it extremely difficult for a married officer to afford his children an education suited to their position in life, and at the same time to save sufficient to enable him to supplement the pension to which he will be entitled on retirement. Your petitioner is convinced that your Lordship cannot consider such a state of affairs satisfactory.

That your petitioner moreover belongs to a highly trained scientific body of men, whose duties involve their spending a very considerable portion of their service under conditions deficient in the ordinary amenities of life, and in a climate that renders such work more than usually arduous. This service is rendered in a Department which is in a marked degree engaged in creating and developing new sources of revenue; and it is largely due to its efforts that the country owes its wealth and prosperity.

That the approximate expenditure on pensions in all services in 1884 and in 1911 compared with the amount of general revenues and of revenues earned by works constructed by the Public Works Department are set forth in the following table in lakhs of rupees:—

	1884.	1911.	Increase.	
			Total.	Percentage.
General Revenues ...	6,706	12,240	5,534	83
Revenue from Public Works	977	3,013	2,036	300
Pension—all Services ...	78	162	84	108

That the increase of revenue from Public Works thus amounts to about 53 per cent. of the increase of general revenues and is about 35 times the total increase of pension charges for all services in the same period.

That while he gratefully acknowledges the benefits derived from the Reorganisation Scheme of 1908, your petitioner ventures to point out that, owing to the withdrawal of Exchange Compensation Allowance, those benefits were in the case of most officers considerably less than would appear at first sight, and compare very unfavourably with the concessions recently granted to the Provincial Branch of the Service, in that the net increase in pay granted to Provincial Engineers during their first 24 years' service has been 25 per cent. as against less than 15 per cent. given to Imperial Engineers for the same period.

That the increased salaries granted to the Imperial and Provincial Services in 1908 doubtless represented what Government after careful consideration at that time deemed absolutely necessary in the relative circumstances of the two services.

That the increase then granted to the Provincial Service has since been proved to be insufficient and your petitioner respectfully submits that this applies equally to the Imperial Service.

That whereas Your Lordship's Government has clearly defined pension as "deferred remuneration," bearing a definite proportion (from 1-3 to 1-2) to salary; yet owing to the fixed maximum, the sliding scale prescribed in Civil Service Regulations Article 641 is practically inoperative; and thus, while the improvement in salary introduced by the recent Reorganisation scheme brought a proportionate increase in pension to the Provincial Engineers, it brought no corresponding increase to the Imperial Engineer.

That while the average scientific training and professional qualifications now demanded are much higher than in the earlier years of the Department, the maximum pension which can ordinarily be earned by an officer in your petitioner's service, and payable in England, has owing to the fall in the exchange value of the rupee, fallen from £500 the figure at which it originally stood and is now fixed at £437-10-0.

That your petitioner believes that his service continues to receive in the matter of pensions and leave allowances the same consideration which is given to the services formerly styled "uncovenanted," and your petitioner submits that this is not in accordance with Secretary of State's despatch No. 18, dated 22nd March 1883, where Lord Kimberley laid down that "under the special rules regarding the pay pension and furlough which have now been provided for them (i.e., Imperial Engineers) they will no longer come under the general Uncovenanted Service Rules, and a special chapter will have to be introduced into the Pension Code to meet their case. The term is therefore no longer applicable to them and should be dropped in India, as it will be here in all official notifications. Moreover as long ago as 1871, the Under Secretary of State for India (Mr. Grant Duff) speaking on the subject of Cooper Hill College and the Indian Engineering Service claimed in the House of Commons that Government had created a new profession on a level with the two great Indian Services—the Civil and the Military."

That your petitioner finds that so far from this equality being observed, the pensions at present granted to his Service compare most unfavourably with those granted to officers of the other scientific Indian Services, certain members of which are employed in your petitioner's own Department doing exactly the same work as your petitioner.

That your petitioner further respectfully submits that there appears to be no reason for this markedly adverse disparity in the pension rules of his own service, and other scientific services. Your petitioner in preparation for his service needed a preliminary education as expensive as that of the Royal Engineer or the Indian Medical Service Officer, and the Civil Engineer is in every way of at least equal importance to the country's life and prosperity. Further that while the pensions granted to those other services mentioned are not greater than the circumstances require, the pensions at present granted to Imperial Engineers are in comparison totally inadequate, and this disparity is emphasised by the want of a suitable Widows and Orphans Fund, the existence of which in the case of the other services renders improbable the chance of their families being left destitute.

That your petitioner when applying for, and accepting his appointment as an Assistant Engineer in the Public Works Department had not formed any correct estimate of the purchasing value of the rupee, and of the cost and conditions of life in India, and he anticipated he would be able to save a material portion of his salary and thus to supplement his pension, but the experience which your petitioner has already gained has proved to him the futility of this hope and has satisfied him that even allowing for the probably lower salary, which he might have drawn to commence with had he sought professional employment otherwise than under the Government of India, the conditions of such employment would in ordinary circumstances have offered him better prospects.

The climatic and other conditions of work in India render retirement at 55 years of age undoubtedly desirable, and at this age your petitioner cannot reasonably hope to obtain other employment with a view to supplementing his small pension.

A man who has worked in better climatic and other conditions is comparatively young at this age, and in ordinary circumstances does not find himself compelled to retire. The conditions of life in India involve the added risk of earlier compulsory retirement on account of ill health, in a degree that does not obtain in more favourable surroundings and this risk becomes greater in the later years of service.

That in view of these facts, your petitioner has satisfied himself that the only course open to him in existing conditions, in order to improve his prospects, in the later years of his life, would be to retire at the earliest permissible date, i.e., after 20 years' service, with a view to seeking other employment in which he would be able to continue to work for a longer period. This however constitutes at the best but an uncertain and unsatisfactory alternative to the prospects which your petitioner anticipated when he entered the service.

Your petitioner therefore humbly prays that your Lordship may be graciously pleased to give early and favourable consideration to this your petitioner's humble memorial.

Firstly, that pensions be granted to all Imperial Engineers according to the scale given below, and be paid in sterling:—

Ordinary Pensions.			
On completing 20 years' service ...	£350		
" " 21 " " ...	380		
" " 22 " " ...	410		
" " 23 " " ...	440		
" " 24 " " ...	470		
" " 25 " " ...	500		
" " 26 " " ...	540		
" " 27 " " ...	580		
" " 28 " " ...	620		
" " 29 " " ...	660		
" " 30 " " ...	700		

Special Service Pensions.

Secondly, that as in accordance with the orders of the Government of India officers are appointed to the administrative grades entirely by merit; an additional special service pension of £40 per year of completed service be accorded to officers in those grades, subject to a maximum total pension of £940 per annum.

Thirdly, that the Leave allowances sanctioned for officers of the Indian Civil Service and Military Officers subject to the Civil Leave Rules may be extended to your petitioner's service.

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

.....Engineer,
.....Province.
.....Public Works Department.

Memorial of 1913.

To

THE MOST HON'BLE,
THE MARQUIS OF CREWE, K.G.,
His Majesty's Secretary of State for India.

The humble petition of.....Engineer, Public Works Department, India.

SHOWETH,

That your Petitioner has learned with dismay, from a letter issued by the Government of India, that

APPENDIX XIII—continued.

Government was unable to further consider the Memorials recently submitted, a large number of Imperial Engineers praying for a revised scale of pensions, until the report of the Royal Commission on the Public Service of India is received.

That your Lordship caused to be stated in the House of Commons on the 9th of October, 1912, that the question raised by the Memorialists was then under examination by the Government of India, and that pending the result of this examination no pronouncement could be made, and that the pensions come within the scope of the Public Services enquiry.

That the first of this reply seems to indicate that Your Lordship has not been kept fully informed of how the Government of India is dealing with this important case.

That the Royal Commission has been unable to deal with the Public Works and Railway Departments during their first tour in India.

That the number of Departments and Services, remaining to be dealt with during future tours, is so large that your Petitioner feels that a final decision on these Memorials may possibly be delayed to a date before which he will have been superannuated, and that therefore, under Article 4 of the Civil Service Regulations, which lays down that an officer's claim to pension is regulated by the rules in force when he retires, the practical effect in your Petitioner's case is a direct negative to the Memorials. Your Petitioner humbly submits that this is not consistent with the tenor of Your Lordship's reply in the House of Commons on the 9th of October, 1912.

Your Petitioner therefore humbly prays that your Lordship may be graciously pleased to give immediate consideration to your Petitioner's humble Memorial.

Firstly, that the pensions be granted to all Imperial Engineers according to the scale given below, and be paid in sterling:—

Ordinary Pensions.			
On completing 20 years' service	...	£350	
" " 21 " "	...	380	
" " 22 " "	...	410	
" " 23 " "	...	440	
" " 24 " "	...	470	

On completing 25 years' service	...	£500
" " 26 " "	...	540
" " 27 " "	...	580
" " 28 " "	...	620
" " 29 " "	...	660
" " 30 " "	...	700

Special Pensions.

Secondly, that as in accordance with the orders of the Government of India officers are appointed to the administrative grades entirely by merit; an additional special service pension of £40 per year of completed service be accorded to officers in those grades, subject to a maximum total pension of £940 per annum.

Leave Allowances.

Thirdly, that the Leave allowances sanctioned for officers of the Indian Civil Service and Military Officers subject to the Civil Leave Rules may be extended to your Petitioner's service.

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

.....Engineer,
.....Province.
Public Works Department.

Letter No. 942-E, dated Simla, the 30th August 1912. From Mr. G. H. LEMAISTRE, DEPUTY SECRETARY TO THE GOVERNMENT OF INDIA, P.W.D. To THE SECRETARY, TO THE GOVERNMENT OF THE PUNJAB, P.W.D.

I am directed to refer to the correspondence ending with your letter No. 0658-E. I., dated the 6th July 1911, forwarding memorials submitted by certain Engineer officers of the Public Works Department in which they pray for the grant of enhanced rates of pensions and for the payment of pensions in sterling.

2. In reply, I am to say that His Majesty's Government having appointed a Royal Commission on the Public Services in India and pension being one of the subjects of reference to the Commission, the Government of India are unable further to consider the matter until the report of the Commission is received. I am to request that the memorialists may be informed accordingly.

APPENDIX XIV.

Memorandum prepared by the Government of Madras relating to the Public Works Department.

IMPERIAL ENGINEER SERVICE.

(i) Present regulations as to recruitment.

This service is recruited from selected candidates appointed in England by the Secretary of State for India in Council. The selection of candidates in England is made on the advice of a Selection Committee including at least one eminent representative of the Engineering profession. Natives of India who are British subjects are eligible for appointment to this service and are selected to the extent of 10 per cent. of the total number of Assistant Engineers thus recruited, if otherwise duly qualified, viz., by age, examination, etc.—vide paragraphs 1 and 5 of the Regulations as to appointment of Assistant Engineers to the Imperial Service.†

Present regulations as to training and probation.

Candidates who have passed through a college course and obtained one of the degrees prescribed should have had at least one year's practical experience of Civil Engineering under a qualified Civil Engineer at the time when they appear before the Selection Committee. Those who have taken no college course should have had a full three years of such practical experience. In the event of any candidate being selected who has not, in the opinion of the Selection Committee, had sufficient practical experience, he may be required to undergo after arrival in India a year's probation in charge of works and his final appointment is dependent upon the result of such probation—vide paragraph 7 of the Regulations as to appointment of Assistant Engineers to the Imperial Service.†

† Vide Appendix XIX.

Whether the regulations are satisfactory.

His Excellency in Council considers the present method of selection to be satisfactory, but it is suggested that paragraph 5 of the present Regulations as to the appointment of Assistant Engineers should be modified so as to provide that, instead of Natives of India being selected in England to the extent of 10 per cent. of the total number of Assistant Engineers recruited, Provincial Engineers should be appointed annually to the Imperial Service to the extent of 10 per cent. of the total recruitment in England, the appointment of Natives of India by the Secretary of State being made in exceptional cases only.

PROVINCIAL SERVICE.

Present Regulations as to recruitment.

This service is recruited—

(1) from the students of the College of Engineering, Madras, being Natives of India as defined in the Statute 33 Vict., Chapter 3, Section 6, at the rate of one every year, and

(2) from the Upper Subordinates of the department at the rate of one in alternate years.

The recruitment from the college is made annually by the Chief Engineer, Public Works Department, in consultation with the Principal of the College, and the appointment is conferred on the student, either Civil or Mechanical Engineer, judged most suitable on the results of the examinations and the promise shown by him and his general behaviour during the college course.

APPENDIX XIV—continued.

Present Regulations as to training and probation.

Students recruited from the College of Engineering, Madras, are appointed by the Local Government as apprentices on Rs. 100 a month. They are promoted to Rs. 150 after six month's period, provided they have given satisfaction during that period, and to Assistant Engineer on Rs. 250, Provincial Service, after a year, provided they are then considered to be in all respects competent to hold charge of a sub-division. In the case of an apprentice who at the end of the first year's service is not considered qualified for confirmation in the department, the Local Government may decide whether he is to be given a further trial or be removed from the department, and ordinarily one who is not within three years from date of appointment as apprentice Engineer recommended for promotion to Assistant Engineer will be so removed.

Whether the present regulations are satisfactory.

No change in the present method of selection from the college is considered to be necessary.

(ii) The rates of pay and allowances in force in 1890 and 1900 and at the present time.

IMPERIAL SERVICE.			
	In 1890.	In 1900.	At the present time.
	Rs.	Rs.	Rs.
Chief Engineer—			
First class ...	2,500	2,500	2,750
Second class ...	2,000	2,000	2,500
Third class ...	1,800	1,800	Abolished.
Superintending Engineers—			
First class ...	1,600	1,600	2,000
Second class ...	1,350	1,350	1,750
Third class ...	1,100	1,100	1,500
Executive Engineers—			
First grade ...	950	1,000	Rs. 800—50—1,250, the increment of Rs. 50 being given annually for approved service.
Second grade ...	800	850	
Third grade ...	700	700	
Fourth grade ...	600	Abolished.	
Assistant Engineers—			
First grade ...	500	550	Rs. 380—40—700—50—750, the increment of Rs. 40 being given annually for approved service until Rs. 70 is reached, the next increment being Rs. 50 a month.
Second grade ...	*350	450	
Third grade ...	250	350	

* Assistant Engineers, second grade, after three years' service in the grade received Rs. 400 a month if recommended.

PROVINCIAL SERVICE.

	In 1890.	In 1900.	At the present time.
		Rs.	Rs.
Chief Engt neers—			
First class ...	There were not two separate services—Imperial and Provincial in 1890.	2,500	2,750
Second class ...		2,000	2,500
Third class ...		1,800	Abolished
Superintending Engineers—			
First class ...	The Engineers appointed in England and in India were borne on the same list and were drawing the same rates of pay which are shown under Imperial service for 1890.	1,050	1,600
Second class ...		900	1,400
Third class ...		750	1,200
Executive Engineers—			
First grade ...		650	Rs. 535—35—850, the increment of Rs. 35 a month being granted annually for approved service.
Second grade ...		550	
Third grade ...		475	
Fourth grade ...		Abolished.	
Assistant Engineers—			
First grade ...		400	Rs. 250—25—475, the increment of Rs. 25 a month being granted annually for approved service.
Second grade ...		350	
Third grade ...		250	

† A special increment of Rs. 50 may be granted by the Local Government to a deserving Executive Engineer who, after completion of five years' service on the maximum pay of Rs. 850, is not promoted to administrative rank.

Allowances.

(1) From the 1st August, 1905, the two Chief Engineers who are also Secretary and Joint Secretary to Government Public Works Department, draw a local allowance of Rs. 250 a month, each.

(2) From the 19th June, 1899, the two Executive Engineers who are Under Secretaries to Government draw a local allowance of Rs. 100 a month, each.

(3) The officers of both the services draw travelling allowances in accordance with the rules in the Civil Service Regulations.

Whether the present rates of pay and allowances are satisfactory.

Rates of pay.—It is considered that no alteration in the rates of pay of the Engineer services is necessary.

Allowances.—The rates of travelling allowances admissible to Gazetted officers under present rules on transfer from one station to another are altogether inadequate and the following scale of rates is proposed:—

Salary of officer after transfer.	Railway fares for himself and family.	Number of servants whose fares by the lowest class will be paid by Government.	Weight of luggage in maunds for the conveyance of which by goods train or cargo steamer Government will pay.	Number of horses for the conveyance of which Government will pay.
I. Officers on less than Rs. 500.	4	3	†15	One horse.
II. Officers on Rs. 500 and less than Rs. 1,500.			†30	Two horses.
III. Officers on Rs. 1,500 and above.			†40	

* With one syce and one grass-cutter for each horse if necessary. A servant making a journey ten days on either side of the date of arrival of the officer at his new station may be included in the maximum number of servants for whom fares are recoverable. † Officers who maintain tents may draw in addition to the cost of the carriage of ordinary luggage, the cost of carriage of tents within the limits already fixed for the purpose of article 1000, Civil Service Regulations.

This scale was recommended to the Government of India in July 1912.

(iii) The number of posts in each grade and the provision, if any, made in the cadre for leave and training.

Number of posts in each grade.

	Provisional until the Provincial Service cadre reaches its maximum strength.	Ultimate.
Chief Engineer—		
First class ...	1	1
Second class ...	1	1
Superintending Engineer—		
First class ...	2	2
Second class ...	2	2
Third class ...	3	3
Imperial Service—		
Executive Engineers ...	35	41
Assistant Engineers ...	19	21
Provincial Service—		
Executive Engineers ...	8	4
Assistant Engineers ...	22	18
	93	93

The provision made in the cadre for leave is 20 per cent. of the total strength.

No provision is made in the cadre for training.

(iv) Appointments outside the authorised cadre held temporarily or otherwise by officers of the Imperial or Provincial Engineer Service.

One of the two posts of Temporary Deputy Sanitary Engineers is held temporarily by Mr. E. W. Lace, an Assistant Engineer of the Imperial Service.

APPENDIX XIV—continued.

(v) Whether any addition is required to the present cadre.

It will be seen from item (iii) above that the present sanctioned number of the Engineer Establishment is—

Chief Engineers	2
Superintending Engineers	7
Executive Engineers	45
Assistant Engineers	39
Total	93

In June 1913, the Government of India were asked to obtain the sanction of the Secretary of State to an additional appointment of Superintending Engineer, second class, to provide for an additional circle of superintendence which was created, in the first instance as a temporary measure, for two years and which has been found to be permanently required. The total number of Superintending Engineers will then be raised from 7 to 8.

The strength of the Engineer cadre in this Presidency was last fixed by the Government of India in

1908 at 92. This strength was fixed on a basis of eight administrative posts, thirty-three divisional and two special and extra charges. In 1909, the Government of India were requested to increase the cadre from 92 to 97 on a basis of nine administrative posts, thirty-three divisional and three special and extra charges. In 1911, the number of administrative posts alone was increased from eight to nine by the inclusion of the post of Sanitary Engineer in the Imperial Engineer cadre in the rank of Superintending Engineer, third class. Since the request made in 1909, the number of administrative and divisional posts have been increased, and the Government of India have recently been requested to fix the strength of the Engineer cadre on a basis of ten administrative posts, thirty-three divisional and six special and extra charges, or a total of forty-nine charges against forty-three in 1908. It is not known what the additions to the cadre will be on account of the increase of six in the number of charges, as the data on which the Government of India calculate the number is not known to this Government.

APPENDIX No. XV.

(Referred to in paragraph 72,602—Mr. C. S. C. Harrison's evidence.)

Transfer expenses of Mr. Henry J. M. Cousens, Assistant Engineer, Acting Executive Engineer.

(i) Dhárwar to Bombay, December 1912—10th December 1912.

(Equal to about 441 miles.)

For self and wife, } +1 servant.
no family.

Item.	Actual expenses.	Travelling Allowance received.
Bullock carts for kit to Dhárwar station including coolies (for all kit)—	Rs. a. p.	Rs. a. p.
10 carts	9 8 0	
Packing expenses—carpenter grass, gunny bags, coolies, &c.	8 0 0	
One wagon kit by goods at wagon rates to Bombay as per Railway receipt Note 15—06180, dated 3rd December 1912.	88 4 0	No allowance given for 20 maunds camp kit and cycles as transfer was to Bombay Secretariat.
Delivery charges for do. by Cox & Co. in Bombay.	19 0 0	
Delivery charges for passenger train luggage.	3 0 0	
Conveyance by rail from Dhárwar to Bombay—		
Two 1st Class fares	81 6 0	
One 3rd Class fare (Mail)	9 0 0	
Rail charge for 10th Decem-ber 1912.	12 0 0	
Rail charge for 10th Decem-ber 1912.	3 0 0	
Passenger train excess luggage (as per General Receipt Note No. 11, dated 10th December 1912).	59 4 0	
Re-transfer of kit from station to house.	7 0 0	
Total	299 6 0	
Received double 1st Class fare ... 1½ miles to Dhárwar Station from Post Office.	—	81 6 0 0 8 0 81 14 0

The above does not include the usual extra expenses due to transfer such as:—

- (1) Loss in sale of furniture at necessarily cheap rates.
- (2) New club entrance fees.
- (3) Conveyance to and from stations.
- (4) Extra cost of meals on trains, etc.
- (5) Breakages.

In some cases the transfer expenses would have been higher still, for example—

- (1) A motor car might have had to be conveyed and no allowance would have been given because the transfer was to the Secretariat in Bombay.
- (2) More servants might have been kept on.
- (3) More kit might have been conveyed. In the above transfer the amount of kit could not have been considered large by any means, etc.

(ii) Sátára to Dhárwar, 10th October 1910.

For self, wife and 3 servants. } Sátára to Dhárwar = 244 miles.

Item.	Actual expenses.	Amount claimed in Travelling Allowance bill, as per rules.
Sátára to Sátára Station—	Rs. a. p.	Rs. a. p.
10 carts, including toll, &c., and filling wagon.	15 0 0	
Tonga to Station—10 miles ... (10 miles @ 8 annas a mile)...	2 8 0	5 0 0
Packing expenses	7 0 0	
Train fare to Dhárwar—		
Two 1st Class ...	45 12 0	45 12 0
Three 3rd Class...	8 7 0	
Goods—		
81 maunds as per Receipt No. 14 of 7th January 1910.	44 8 0	
One horse as per Receipt No. 4 of 7th October 1910.	30 8 0	30 8 0
Two cycles (1 motor cycle as per Receipt No. 10 of 10th October 1910).	4 0 0	
(One cycle) ...	—	2 0 0
Excess luggage in mail train—		
Mds. srs.		
Weight 12 31		
Free 3 15		
Weight charged 9 16 = Rs. 19 as per Receipt No. 10 of 10th October 1910.	19 0 0	
Camp kit per passenger train	—	15 2 6
Do. goods train 12½ maunds.	—	6 13 10
20		
Cart hires—		
Dhárwar to bungalow—9 carts at 9 annas each.	5 1 0	
(2 miles from Station at Dhárwar to Post Office at 8 annas per mile).	—	1 0 0
Dumney hire in Dhárwar on arrival—Station to house.	0 8 0	
Cooly hires on stations	1 0 0	
Total	183 4 0	106 4 4

The above does not include the usual extra expenses due to transfer such as:—

- (1) Loss in sale of furniture at necessarily cheap rates.
- (2) New club entrance fees (otherwise unnecessary).
- (3) Extra cost of meals on trains.
- (4) Breakages, etc.

The amount of kit conveyed in the above transfer was very small and included very little furniture indeed.

APPENDIX XV—continued.

(iii) Dhárwar to Hubli, January 1912, and Hubli to Dhárwar, March 1912.

Mileage each way—12.

Item.	Actual expenses.	Amount claimed in Travelling Allowance and allowable as per rules.
	Rs. a. p.	Rs. a. p.
14 bullock carts kit 12 miles at 2 annas per mile each	21 0 0	
Packing expenses, grass, &c., approximate	5 0 0	
Train fare for wife (servants and self by road)	1 4 0	
No conveyance expenses from and to stations as dumney hired in Dhárwar was kept on at Hubli.	0 4 0	
Station coolies	—	
Total	27 8 0	
Amount admissible as per rules—daily allowance for one day, Rs. 4....	—	4 0 0
Total	—	4 0 0

The above does not include the usual extra expenses due to transfer such as in this case—

- (1) New club entrance fee (otherwise unnecessary).
- (2) Breakages, etc.

APPENDIX XVI.

Memorandum prepared by the Government of Bombay relating to the Public Works Department.

1. The present regulations as to recruitment, training and probation, and whether these regulations are satisfactory.

The Engineer Establishment is recruited from the following sources:—

For the Imperial Service—

(1) Selected candidates appointed in England by the Secretary of State.

(1a) Temporary Engineers who have been sent out by the Secretary of State on covenant for a few years.

(2) Officers of the Corps of Royal Engineers on the Indian Establishment.

For the Provincial Service—

(3) Passed students of the Indian Civil Engineering Colleges, and,

(4) Promoted Upper Subordinates.

The candidates of the first-named class were, up till 1907, selected from Coopers Hill College. They are now appointed by the Secretary of State, with the advice of a Committee of Selection, from amongst applicants in possession of certain specified University degrees or other approximately equivalent qualifications. Ten per cent. of the appointments thus made are reserved for duly qualified natives of India, but only one such appointment has as yet been made on the Bombay Establishment. Since Coopers Hill was abolished 4 Indians have been added to Imperial Establishment. Three of them were from amongst those finishing off at Coopers Hill after outsiders were first appointed, viz., Messrs. M. A. Mirza, D. R. Sawhney and S. B. Tyabji, e.g., in 1905, 1906 and 1907. Mr. T. S. Mirchandani came in 1911. A candidate who has not had sufficient practical experience may be required to undergo, after arrival in India, a year's probation in charge of works, his final appointment being made dependent upon the result of such probation. A report is to be submitted to the Government of India on such officers at the end of the year. A copy of the rules is appended.* The usual rate of recruitment from England for Bombay is two per year, though this rate has been increased at times to meet heavy pressure of work. Two Royal Engineer officers were appointed in 1909. Appointments from that Corps are seldom made now-a-days. The rate of recruitment from the Poona

College of Engineering is one candidate per year and, from the Upper Subordinate class one every alternate year, or 1½ per year on an average.

2. Up to 1891, two appointments, one as Assistant Engineer, and the other as Apprentice Engineer were allowed for this Presidency from the Poona College. In 1891 the Government of India at the request of the Government of Bombay agreed to take the Apprentice on to their list, and since then only one appointment is made from the Poona College. Three appointments were made by the Government of India in 1892, 1893 and 1894. In 1895 this Government retained the second man.

3. In 1892, the Provincial Engineer service was established and it took effect from the year 1896. Under the rules governing this service, the appointment of one man in each year from the Poona College has been continued but on somewhat less favourable terms, the student eligible being appointed as an Apprentice Engineer in the first instance and promoted to be Assistant Engineer, 3rd Grade, after one year of approved service. This is a year of probation and of training in one, while the Imperial Engineers usually have their year's training at home. Under the previous arrangement, the men appointed as Assistant and Apprentice Engineers were required to have passed the L.C.E. Examination of the Bombay University in the First Class and the first two men were taken; but the present rule is to select the most suitable man from among graduates in the First Class as Apprentice Engineer. The Government order* is as under:—

“Under the guarantee at present in force, vide Government Notifications noted in the footnote,† the candidate who passes first in the First Class of the Bombay University Examination for the degree of L.C.E. is appointed to the permanent Engineer Establishment of the Public Works Department. But, while educational attainments are necessary, there are other factors such as physique, antecedents, character, manners, etc., which must be taken into consideration in making an appointment of Assistant Engineer. Government, therefore, consider that the

* Government Notification (Public Works Department), No. E.—580, date 26th February, 1908.

† Government Notification No. 10, dated 18th, February, 1885. Government Notification No. 36, dated 20th May, 1891. Government Notification No. 42, dated 2nd August, 1892. Government Notification No. 10, dated 31st January, 1893.

existing terms of the guarantee require modification, and they are pleased to direct that in future the guaranteed appointment is to be conferred not necessarily on the candidate who stands first in the order of examination but on the one, from amongst the candidates, in the First Class, who appears best fitted generally for a post in Government service."

Men promoted from the Upper Subordinate class are of course appointed as Assistant Engineers at once.

4. The recruits from England and those from the Poona College are borne on the same list and their positions are determined according to the dates on which they reach the rank of Assistant Engineer. The appointments of the former take effect from 1st October, while the latter enter between February and March. The order of seniority, therefore, of these officers is fixed as follows:—

Recruits from England of say, October 1912, then Poona College Recruit of March 1912 who undergoes apprentice work until March 1913, which corresponds to the year of practical work required of Imperial Engineers before being appointed, then

Recruit from Upper Subordinate class if appointed later than March 1913, and then

Recruit from England in 1913.

5. The following orders regarding a practical course of training for the recruits from the College of Engineering (Poona) have been issued by the Government of Bombay:—"After a passed student is appointed Apprentice Engineer he must be placed on some large Engineering work to undergo a year's course of practical work under an Executive Engineer. During the period of apprenticeship he will be required to maintain a note-book fully illustrated with neat sketches showing all details connected with the work, including manufacture of materials. He should record, from actual measurement, what quantities of fuel and limestone or kankar are required for 100 cubic feet of lime, and when these vary, try

to explain the cause, what quantity of different classes of work a bricklayer or stone-mason can lay in a day, and what assistance he requires, what quantities of lime, sand or surkhi and stone or brick are required per 100 cubic feet of masonry, etc., etc. He should also record the difficulties encountered and how they have been overcome. The note-book should be submitted every month to the Principal, College of Engineering, Poona, through the Executive Engineer and the Superintending Engineer who will pass it on without delay, making such remarks as may be called for. It should be returned by the Principal direct to the Apprentice, his remarks being communicated to the Superintending Engineer. If at any time during the period of apprenticeship, it appears to the Principal that the Apprentice is not receiving sufficient attention or not obtaining sufficiently varied experience he should draw the attention of the Superintending Engineer to the fact and make suggestions. Towards the end of the 12 months the Executive Engineer should report to the Superintending Engineer through the Principal his general opinion on the manner in which the Apprentice Engineer had used his opportunities of acquiring practical knowledge. When passing on the report, the Principal in consideration of the manner in which the note-book has been maintained should report to the Superintending Engineer whether the Apprentice had done creditably. The Superintending Engineer should submit the reports to Government with his own observations."

6. The course for the final examination in Engineering in the Poona College has been made more comprehensive, and the old degree of *Licentiate of Civil Engineering* has been converted into that of *Batchelor of Engineering*.

7. The present regulations as to recruitment, training and probation are considered satisfactory, except that the recruitment should be more regular, and increased as soon as the expectation of an increased cadre is justified.

2. The rates of pay and allowances in force in 1890 and 1900 and at the present time, and whether the present rates of pay and allowances are satisfactory.

Grades.	Rates of pay in 1890.	Rates of pay in 1900.		Present rates of pay (viz., in April 1913).	
		Imperial.	Provincial.	Imperial.	Provincial.
Chief Engineer, 1st Class ...	Rs. 2,500	Rs. 2,500	Rs. 2,500	Rs. 2,750	Rs. 2,750
Do. 2nd Class ...	2,000	2,000	2,000	2,500	2,500
Do. 3rd Class ...	1,800	1,800	1,800	—	—
Superintending Engineer, 1st Class ...	1,600	1,600	1,050	2,000	1,600
Do. 2nd Class ...	1,350	1,400	900	1,750	1,400
Do. 3rd Class ...	1,100	1,250	750	1,500	1,200
Executive Engineer, 1st Grade ...	*950	*1,000	*650	800—50—1,250	545—35—850
Do. 2nd Grade ...	800	850	550		
Do. 3rd Grade ...	700	700	475		
Do. 4th Grade ...	600	—	—		
Assistant Engineer, 1st Grade ...	500	550	400	380—40—700	250—25—475
Do. 2nd Grade ...	450	450	350		
Do. 3rd Grade ...	350	350	250		
Apprentice ...	100	Old 250	150†	—	150†

* Two periodic increments, each to the extent of Rs. 50 per mensem, were granted to Executive Engineers, 1st Grade, under certain circumstances. A minimum of 4 years' approved service in the grade was necessary to qualify for the first increment and a further minimum period of 4 years' approved service for the second.

† Assistant Engineers 2nd Grade, after 3 years' service in the grade received Rs. 50 per mensem more if recommended.

‡ Apprentice Engineers receive Rs. 150 a month after 6 months' satisfactory service.

§ Plus Rs. 250 per mensem for holding the posts of Secretary and Joint Secretary to Government.

|| A special increment of Rs. 50 per mensem may be granted by the Local Government to a deserving Executive Engineer who after completion of 5 years' service on the maximum pay of Rs. 850 is not promoted to administrative rank.

The Bombay Government have recently represented* that the pay of Public Works Department officers below administrative rank (stationed in Bombay) is

* Vide Annexure B.

insufficient, and they have strongly recommended a presidency allowance of Rs. 250 per mensem for Executive Engineers and of Rs. 150 per mensem for Assistant Engineers.

3. The number of posts in each grade and the provision, if any, made in the cadre for leave and training.

The number of posts in each grade, etc., is as under:—

	Number of posts as per sanctioned cadre.
Chief Engineer, 1st Class ...	1
Chief Engineer, 2nd Class ...	2
Superintending Engineer, 1st Class ...	2
Superintending Engineer, 2nd Class ...	2
Superintending Engineer, 3rd Class ...	2
Executive Engineers ...	49
Assistant Engineers ...	42
Total ...	100

Temporary Superintending Engineer on Rs. 1,500 per mensem for 2 years 1

Total ... 101

The cadre includes provision for absentees on leave at 17 per cent. on total strength. The cadre does not include any provision for training.

4. What appointments outside the authorized cadre are held, temporarily or otherwise, by officers of the various services?

The following appointments outside the authorized cadre are held by officers engaged on short agreements, etc.:—

- (1) Consulting Architect (Pay Rs. 1,500–50–1,750.) to Government.
- (2) Assistant to the Consulting Architect to Government. (Pay Rs. 500–40–660.)
- (3) Assistant to the Consulting Architect to Government. (Pay Rs. 340–40–500.)
- (4) Electrical Engineer (Pay Rs. 1,000–50–1,200.)
- (5) Electrical Inspector (Pay Rs. 650–50–750.)
- (6) Mechanical Engineer to Government. (Pay Rs. 1,100 per mensem for the first three years; Rs. 1,150 per mensem for the fourth year. Thereafter it is to rise by annual increments of Rs. 50 per mensem to Rs. 1,750 per mensem.)

(7) Temporary Engineer for Boring Work. (Pay Rs. 700 per mensem for the first year and Rs. 800 per mensem for the next 4 years.)

(8) Analyst to the Sanitary Board. (Pay Rs. 500–20–600.)

2. In addition to the above-mentioned officers there are 20 temporary Engineers under the yearly sanction on the rates of pay shown below:—

Number of Officers.	Rate of pay per mensem
2 ...	Rs. 1,200
2 ...	800
1 ...	750
1 ...	620
2 ...	600
1 ...	550
2 ...	500
3 ...	450
2 ...	400
2 ...	300
2 ...	250
Total ...	20

5. Whether any addition is required to the present cadre.

An increased cadre (100 to be raised to 132 officers) was recommended in letter No. E-4418* of 23rd April 1913. But on the Government of India* pointing out that junior officers may not exceed a certain proportion of the whole, it is necessary to reconsider the request. A modified increase may be asked for, and a request may be made that the normal recruitment be increased so as avoid spasmodic increases such as have occurred in the last ten years.

* Vide Annexures C and D.

† Vide Annexure A.

ANNEXURE A.

Statement showing recruitment to the Imperial Branch of the Engineer Establishment of the Bombay Public Works Department from 1894 to 1913.

Year.	Number of Recruits.	Whether an increase to the cadre was sanctioned.
1894 ...	3	—
1895 ...	4	—
1896 ...	2	—
1897 ...	3	—
1898 ...	1	—
1899 ...	4	Yes.*
1900 ...	2	—
1901 ...	2	—
1902 ...	3	—
1903 ...	3	Yes.†
1904 ...	4	—
1905 ...	7	Yes.‡
1906 ...	4	—
1907 ...	\$10	—
1808 ...	\$8	
1909 ...	¶6+2**=8	—
1910 ...	4	—
1911 ...	2	—
1912 ...	2	—
1913 ...	3	—

* The cadre was increased from 80 to 81 as the appointment of the Sanitary Engineer to Government was transferred from the General to the Public Works Department.

† The cadre (which was reduced from 81 to 80 in 1901 (was increased from 80 to 82 consequent upon the appointments of the second Secretary and the second Under Secretary to Government, Public Works Department.

‡ The cadre was increased from 82 to 101 to provide for additional executive charges.

§ Of these, two were from covenanted temporary Engineers.

|| The cadre has been fixed at 100 consequent upon the Re-organization of the Engineer Establishment in 1908.

¶ Of these one was from covenanted temporary Engineers.

** Two transferred from Military Works Services.

ANNEXURE B.

INDIAN PUBLIC WORKS DEPARTMENT AND INDIAN STATE RAILWAYS.

Regulations as to Appointment of Assistant Engineers, 1913. (Vide Appendix XIX.)

ANNEXURE C.

No. E. 4418 of 1913.

Public Works Department.

Bombay Castle, 23rd April 1913.

From H. V. R. KEMBALL, Esq., Secretary to the Government of Bombay; to the SECRETARY to the GOVERNMENT OF INDIA, Public Works Department.

Establishments.

Sir,

I am directed to address the Government of India with regard to the urgent necessity for strengthening the staff of the Public Works Department in the Bombay Presidency.

2. The sanctioned cadre of the department is at present fixed at 100 officers. This strength is even now insufficient for the regular work of the department and 105 officers are actually employed. The large construction works in progress necessitate a considerable temporary increase of staff and this is

APPENDIX XVI—continued.

being met by the employment of Temporary Engineers. Twenty-two Temporary Engineers are employed at present, of whom ten noted in the footnote* are employed on special work and are not taken into consideration in the calculations of establishment in this letter. The remaining twelve Temporary Engineers are employed on the regular work of the department and are being added to as capable men offer.

3. But considerable difficulty is experienced in obtaining a sufficient number of capable Temporary Engineers. The completion of the large irrigation works now under construction and of those which will most probably be taken in hand and completed within the next twenty-five years will necessitate a considerable increase in the permanent strength of the department for their maintenance. There are strong objections to appointing the extra men in a block when required because the block will cause hardship when the men are ripe for executive charges and for promotion to administrative appointments, while, if the men are appointed gradually, they will be most useful for the construction work. It is, therefore, proposed to determine now the permanent strength that will be required when these works are opened and to regulate at once the annual recruitment so as to provide this strength.

4. There are at present 38 sanctioned permanent executive charges including the two appointments of Under Secretary to Government. From these must be deducted the two additional charges—Provincial or Imperial—which have not been formed, the Survey and Construction District which has been temporarily closed, and one of the Jamrao Canal Districts since the amalgamation of the two districts into one may now be considered permanent. The new Kolaba District sanctioned for two years as an experimental measure must, however, be considered permanent. It may thus be taken that there are 35 permanent Executive charges, of which 20 are Provincial and 15 Imperial. There are also five temporary Executive charges, viz., the Pravara Canals, the Poona Drainage and Water Supply District, and the Lake Whiting, Lonand, and Malsiras Districts of the Nira Canals. These are all construction districts and will be closed when the works are completed.

5. Executive charges will, however, have to be formed for the maintenance of the large irrigation works now under construction or contemplated in the near future. The Godavari Canal construction district has been closed and amalgamated with the Nasik and Ahmednagar Irrigation District. When the Godavari Canal is opened for irrigation, this combined district will be too large for one charge and it is proposed to form a new district to be called the Ahmednagar Irrigation District, which will include the irrigation in the Ahmednagar District and the irrigation under the Pravara Canal when opened. The Nira Canal must be formed into a separate charge for maintenance. It is presumed further that the construction of the Sukkur Barrage and Indus Left Bank Canal, and the Gokak Canals will be completed within 22 years from the present time. The former, with more than 500,000 acres of new irrigation, will require two additional Executive charges and the latter one Executive charge for maintenance. Thus within the next 22 years five new Imperial Executive charges will be required. The rapid extension of Sanitary works in this Presidency makes it imperative that two new Executive charges, Northern and Southern, should be formed at once, and the Government of India is being separately addressed on this matter. I am to assume that these two additional charges will be formed at an early date, and that the number of Provincial Executive charges will thus be increased to 22.

6. I am to attach hereto a statement† prepared to show the Engineer staff which will, in the opinion

* Mr. Wittet, Consulting Architect; Mr. Mercer, Assistant Architect; Mr. Phipps, Assistant Architect; Mr. Stuart-Menteth, Electrical Engineer; Mr. Wilson, Electric Inspector; Mr. Thielton Dyer, Mechanical Engineer; Mr. Mandy, Sanitary Executive Engineer; Mr. Hubbell, Boring Engineer; Mr. Kirloskar Under Electrical Engineer; Mr. Dooris, Boring Engineer.

† Printed as an accompaniment.

of Government, be required when the Executive charges detailed in the last paragraph are sanctioned, in comparison with the staff as sanctioned, and as it stands at the present time. From this statement it will be seen that the strength when those Executive charges are sanctioned, should be 113 or, adding 17 per cent. for absentees, 132 in all.

7. I am to observe that, pending the completion of the great irrigation works, the establishment during construction must of course be much in excess of the requirements above figured out. The comparison will be somewhat as follows:—

Construction district dealt with.	Executive Engineers.	Assistant Engineers.	Instead of permanent Maintenance district dealt with	Executive Engineers.	Assistant Engineers.
Godavari and Pravara Canals.	1	8	Ahmednagar Irrigation.	1	2
Nira Right Bank Canals 3 districts.	3	6	Nira Canals ...	1	3
Gokak Canal 2 districts.	2	5	Gokak Canal ...	1	1
Rohri Project 4 districts at least.	4	8	2 Districts ...	2	6
Total ...	10	27	Total ...	5	12

The difference will have to be made up by appointing temporary men to the extent required. The strength required, taking into consideration works under construction, will always be in excess of the figure given in the end of the last paragraph, for the Godavari Canal will not be completed for two years from now; the Pravara Canals will take five years to complete; the Nira Canals will require 12 years for completion; the Gokak Canal can be begun in 1915 and will then be completed in 1925; and the Sukkur Barrage and Rohri Canal, if begun in 1915, will probably not be finished before 1930.

8. The above projects are those which have been fully elaborated and submitted to the Government of India for approval. There are several others which will no doubt follow these, but the purpose of the present letter is to deal only with schemes which will in all human probability be brought into existence within the next 10 or 15 years. The proposals may be found later on to be insufficient for the needs of the department, but they will not be in excess of requirements.

9. Investigation shows that the average term of an Engineer's service in the Bombay Public Works Department is 22 years. Taking figures for the last 20 years in the Bombay list, it has been found that 62 men retired or resigned giving an average of 3.1 men per annum with an average service of 25½ years, and 23 men died, giving an average of 1.1 men per annum with an average service of 11.3 years. The average cadre for the period was 89.1 men so that for a cadre of 132 men the loss would be about 6.3 or say 6 men per annum. This is, therefore, the rate at which recruitment may take place, and in 22 years the cadre will be complete. It is assumed that the recruitment will be in the proportion of 4 from home, and 10 per cent. of Indians as at present, and two from this country instead of 1½ as at present. I am, therefore, to ask that the Secretary of State may be moved to increase the annual recruitment from home to four officers.

10. I am now to explain the necessity for the additional Superintending Engineer provided in the statement for Irrigation in Deccan. Now that the new Kolaba District has been sanctioned, the Northern Division includes seven Executive Districts, the annual expenditure of which may be taken at Rs. 24 lakhs excluding local fund works. The Southern Division includes seven districts with an expenditure of about Rs. 21 lakhs excluding local fund works. The Central Division includes eight permanent Executive Districts with an annual expenditure of about Rs. 25 lakhs excluding local funds. In addition, this Division has now for some years included two construction districts, viz., the Godavari

APPENDIX XVI—continued.

Canals just closed, and the Pravara Canals. These ten districts have formed a very heavy charge for one Superintending Engineer.

11. When the construction of the enlarged Nira Canal was sanctioned, it was not considered advisable to entrust the three new construction districts to the Superintending Engineer, Southern Division, though this would appear to be numerically a more suitable division of labour. Though the Right Bank Canal lies partly in the Southern Division, Lake Whiting, the Left Bank Canal and the greater part of the Right Bank Canal are in the Central Division, and it was considered advisable to place the whole canal under one Superintending Engineer. The Southern Division is ill-provided with facilities for rapid communication. Ratnagiri and a considerable part of Kánara are shut off by the Western ghats with few roads for communication, mountainous and intersected by creeks running on land nearly to the foot of the ghats, and with no railways. On the other hand, the Central Division lies entirely upon the Deccan plateau, is well provided with railways running through each of the districts, and the headquarters are within easy access to the Nira Canal. It was, therefore, decided to place the three districts as a temporary measure under the Superintending Engineer, Central Division. But it is clear that this arrangement cannot be allowed to continue. Twelve Executive Districts, with an expenditure of more than Rs. 50 lakhs per annum, are too much for one officer to supervise, and the health of the officer and the public interests must suffer.

12. I am to say that the Governor in Council, after careful consideration, is of opinion that it is necessary that a new division of superintendence should be formed at once. This division would be called the Deccan Irrigation Division, and would comprise for the present the following Imperial Districts:—

- (i) Násik and Ahmednagar Irrigation.
- (ii) Pravara Canals.
- (iii) Poona Irrigation.
- (iv) Lake Whiting District, } Nira Right Bank
- (v) Lonand District } Canal.
- (vi) Malsiras District }

The expenditure of this division in 1913-1914 will be over Rs. 40 lakhs for works only, and is not likely to be less than this for the next five years at the least. It appears very probable that this division will be permanently required for the maintenance of the great canals with their complex system of intensive irrigation, but at present I am to ask only that the formation of the new division shall be sanctioned for five years as a temporary measure.

13. The Central Division will then comprise the following Provincial Districts:—

- (i) East Khándesh. (iv) Ahmednagar.
- (ii) West Khándesh. (v) Sholápur.
- (iii) Násik. (vi) Poona.

The expenditure of these six districts is at present about Rs. 23 lakhs, excluding local fund works, and it is improbable that it will ever fall below Rs. 21 lakhs.

14. I am now to recapitulate very briefly the requirements put forward for the approval of the Government of India and the sanction of the Secretary of State:—

(a) The increase of the cadre of the Engineer Establishment from 100 to 132 and a recruitment of 6 men every year.

(b) The constitution of a new administrative division and appointment of an additional Superintending Engineer, 2nd Class, making a total of 7.

(c) As the present Superintending Engineer, Central Division, is much overworked, it is requested that the Secretary of State's sanction to (b) may be obtained by cable.

The necessary proposition statement in the prescribed form will be submitted on receipt of the approval of the Government of India to these proposals. It is difficult to calculate correctly the extra cost involved by the proposed increase in the scale as the additional staff is to be employed gradually. The Accountant-General, who was consulted in the matter, is unable to calculate it in the absence of actuarial tables. Roughly speaking, however, and assuming that the scale proposed will be fully worked up to, the extra cost will be about Rs. 7,000 per mensem as under:—

	Per mensem.
Excess.	Rs.
1 Superintending Engineer, 2nd Class	1,750
7 Executive Engineers (5 Imperial at the minimum rate of pay Rs. 800 and 2 Provincial at Rs. 535 per mensem)	4,000
	1,070
19 Assistant Engineers (13 at Rs. 380 per mensem and 6 at Rs. 250 per mensem)	4,940
	1,500
	13,260

Deduct cost of the 12 temporary Engineers referred to at end of paragraph 2 above:—

	Rs.
Mr. Benson ...	1,200
Mr. Weatherdon ...	700
Mr. Combi ...	550
Mr. Bayliss ...	750
Mr. Walker ...	620
Mr. Bhandarkar ...	300
Mr. Shaik Ebrahim ...	450
Mr. Davies ...	450
Mr. Bhagvat ...	500
Mr. Goodwin ...	500
Mr. Lyttle ...	250
Mr. Naik ...	250
	6,520
Total ...	6,740

I have the honour to be,
Sir,

Your most obedient servant,
H. V. R. KEMBALL,
Secretary to Government.

Accompaniment to this letter—1 Statement.

APPENDIX XVI—continued.

ACCOMPANIMENT TO ABOVE.

Statement showing the sanctioned scale of the Engineer Establishment, the actual strength, and the proposed strength necessary to meet normal requirements of the Bombay Public Works Department.

Cadre sanctioned in 1906 and as reduced (from 101 to 100) after the re-organization of 1908.										Actual strength.										Proposed strength.										Remarks.
										C.E.* S.E.* E.E.* A.E.* Total.										C.E.* S.E.* E.E.* A.E.* Total.										
1	2	3	4	5	6	7.	8	9	10	11	12	13	14	15	16	17	18	19	20											
Chief Engineer and Secretary to Government.	1	—	—	—	1	Chief Engineer and Secretary to Government.	1	—	—	—	—	1	Chief Engineer and Secretary to Government.	1	—	—	—	1												
Chief Engineer and Joint Secretary to Government.	1	—	—	—	1	Chief Engineer and Joint Secretary to Government.	1	—	—	—	—	1	Chief Engineer and Joint Secretary to Government.	1	—	—	—	1												
Chief Engineer in Sind having charge of the Indus River Commission.	—	—	—	1	2	Chief Engineer in Sind having charge of the Indus River Commission.	1	—	1	1	(2)	3	Chief Engineer in Sind having charge of the Indus River Commission.	1	—	—	3	4												
NORTHERN DIVISION.	—	—	—	—	1	NORTHERN DIVISION.	—	—	—	—	—	1	NORTHERN DIVISION.	—	—	—	—	1												
Provincial.	—	—	—	—	2	Provincial.	—	—	—	—	—	2	Provincial.	—	—	—	—	2												
(1) Ahmedabad ...	—	—	—	1	2	(1) Ahmedabad ...	—	—	—	—	—	2	(1) Ahmedabad ...	—	—	—	—	2												
(2) Kaira and Panch Mahals ...	—	—	—	1	2	(2) Kaira and Panch Mahals ...	—	—	—	—	—	2	(2) Kaira and Panch Mahals ...	—	—	—	—	2												
(3) Surat and Broach ...	—	—	—	1	2	(3) Surat and Broach ...	—	—	—	—	—	2	(3) Surat and Broach ...	—	—	—	—	2												
(4) Presidency ...	—	—	—	1	2	(4) Presidency ...	—	—	—	—	(1)	2	(4) Presidency ...	—	—	—	—	2												
(5) Thana ...	—	—	—	1	2	(5) Thana ...	—	—	—	—	—	2	(5) Thana ...	—	—	—	—	2												
(6) Kolaba ...	—	—	—	1	2	(6) Kolaba ...	—	—	—	—	—	1	(6) Kolaba ...	—	—	—	—	1												
Imperial.	—	—	—	—	2	Imperial.	—	—	—	—	—	2	Imperial.	—	—	—	—	2												
(6) Gujarat Irrigation ...	—	—	—	1	2	(6) Gujarat Irrigation ...	—	—	—	—	(1)	1	(6) Gujarat Irrigation ...	—	—	—	—	1												
CENTRAL DIVISION.	—	—	—	—	1	CENTRAL DIVISION.	—	—	—	—	—	1	CENTRAL DIVISION.	—	—	—	—	1												
Provincial.	—	—	—	—	2	Provincial.	—	—	—	—	—	2	Provincial.	—	—	—	—	2												
(7) East Khandesh ...	—	—	—	1	2	(7) East Khandesh ...	—	—	—	—	—	2	(7) East Khandesh ...	—	—	—	—	2												
(8) West Khandesh ...	—	—	—	1	2	(8) West Khandesh ...	—	—	—	—	—	1	(8) West Khandesh ...	—	—	—	—	1												
(9) Nasik ...	—	—	—	1	2	(9) Nasik ...	—	—	—	—	(1)	1	(9) Nasik ...	—	—	—	—	1												
(10) Ahmednagar ...	—	—	—	1	2	(10) Ahmednagar ...	—	—	—	—	(2)	1	(10) Ahmednagar ...	—	—	—	—	1												
(11) Sholapur ...	—	—	—	1	2	(11) Sholapur ...	—	—	—	—	—	1	(11) Sholapur ...	—	—	—	—	1												
(12) Poona ...	—	—	—	1	2	(12) Poona ...	—	—	—	—	(1)	2	(12) Poona ...	—	—	—	—	2												
DECCAN IRRIGATION DIVISION.	—	—	—	—	2	DECCAN IRRIGATION DIVISION.	—	—	—	—	—	2	DECCAN IRRIGATION DIVISION.	—	—	—	—	2												
Imperial.	—	—	—	—	2	Imperial.	—	—	—	—	—	2	Imperial.	—	—	—	—	2												
(14) Poona Irrigation ...	—	—	—	1	2	(14) Poona Irrigation ...	—	—	—	—	—	2	(14) Poona Irrigation ...	—	—	—	—	2												
(14) Nasik and Ahmednagar Irrigation.	—	—	—	1	2	(14) Nasik and Ahmednagar Irrigation.	—	—	—	—	—	2	(14) Nasik and Ahmednagar Irrigation.	—	—	—	—	2												
(16) Pravara Canals ...	—	—	—	—	2	(16) Pravara Canals ...	—	—	—	—	—	2	(16) Pravara Canals ...	—	—	—	—	2												
(17) Lake Whiting ...	—	—	—	—	2	(17) Lake Whiting ...	—	—	—	—	—	2	(17) Lake Whiting ...	—	—	—	—	2												
(18) Lonand ...	—	—	—	—	2	(18) Lonand ...	—	—	—	—	—	2	(18) Lonand ...	—	—	—	—	2												
(19) Malsiras ...	—	—	—	—	2	(19) Malsiras ...	—	—	—	—	—	2	(19) Malsiras ...	—	—	—	—	2												
(17) Nira Canal ...	—	—	—	—	2	(17) Nira Canal ...	—	—	—	—	—	2	(17) Nira Canal ...	—	—	—	—	2												

* Formerly named as Khandesh District.

+ Formerly named as Khandesh Irrigation.

APPENDIX XVI—continued.

SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													SOUTHERN DIVISION.													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APPENDIX XVI—continued.

Statement showing the sanctioned scale of the Engineer Establishment, the actual strength, and the proposed strength necessary to meet normal requirements of the Bombay Public Works Department—continued.

Cadre sanctioned in 1906 and as reduced (from 101 to 100) after the re-organization of 1908.	Actual strength.						Proposed strength.						Remarks.
1	C.E.*	S.E.*	E.E.*	A.E.*	Total		C.E.*	S.E.*	E.E.*	A.E.*	Total		
Brought forward	2	3	3	14	15	34	3	2	17	25	47	14	20
SECRETARIAT.													
35) Under Secretary to Govern-	—	—	1	1	2	(39)	—	—	—	1	1	(41)	1
ment.													
(36) Under Secretary to Govern-	—	—	1	1	2	(40)	—	—	—	1	1	(42)	1
ment.													
ADDITIONAL CHARGES.													
(37) and (38) ... to Govern-	—	—	2	2	4	Nil	—	—	—	2	2	Nil	
ment. Consulting Architect to Govern-						ment.						Consulting Architect to Govern-	
Absentees at 17 per cent. ...	—	—	8	6	14†	Absentees	—	1	9	3	13	Absentees	8
Foreign Service, lent, &c. ...	—	—	—	—	—	Foreign Service	—	1	4	1	6	Foreign Service	—
Total	2	7	46	45	100	Total	3	6	43	53	105	Total	192

A.E.=Assistant Engineer.
T.E.=Temporary Engineer.* C.E.=Chief Engineer.
S.E.=Superintending Engineer.
E.E.=Executive Engineer.

† In the sanctioned cadre the number is 15, but the reduction of 1 to bring down the total from 101 to 100 is taken here.

APPENDIX XVI—continued.

ANNEXURE D.

No. 2309-E.

GOVERNMENT OF INDIA. PUBLIC WORKS DEPARTMENT.
Establishments.

From The Honourable Mr. R. P. RUSSELL, Secretary to the Government of India, Public Works Department, to The SECRETARY to the GOVERNMENT of BOMBAY, Public Works Department.

Simla, the 31st October 1913.

Sir,

I am directed to refer to your letter No. E.—4418, dated the 23rd April 1913, submitting the proposals mentioned below in connection with the cadre of the Engineer Establishment in the Bombay Presidency:—

(1) that a sixth administrative division be constituted, for a period of five years in the first instance, by splitting up the Central Division, and that an additional appointment of Superintending Engineer, class II, be sanctioned for that period for the charge of the new Division;

(2) that the cadre be increased from 100 to 132 Engineers;

(3) that six Assistant Engineers be recruited annually.

2. The Government of India concur in the conclusion come to by the Government of Bombay that the Central Division as at present constituted is too heavy a charge for a single Superintending Engineer to administer efficiently. They also think it possible that an additional Division will be required for the next five years, as suggested by the local Government; but they consider that pending the fixation of the cadre of the Engineer establishment in the Bombay Presidency—a matter which has already been referred to the Secretary of State—it will be better to create the new division for a period of two years in the first instance. It is for this reason that in their telegram No. 1683-E., dated the 29th August 1913, they sanctioned the creation of an additional Superintending Engineership for that period only. The additional appointment being a temporary one, cannot be added to the 2nd class of Superintending Engineerships, as proposed by the Government of Bombay, but must in accordance with the usual practice in such cases be placed in the lowest class.

3. With regard to the proposals relating to the increase of the cadre, I am to point out that the calculations on which the proposals are based do not follow the principles relating to the calculation of the strength of a cadre with reference to a given number of "superior posts." The increase in the number of inferior appointments proposed by the Government of Bombay is out of all proportion to the number of superior posts available in the Presidency if an equitable flow of promotion is to be assured and if blocks are to be avoided. As explained in paragraphs 5 and 6 of Sir Lionel Jacob's letter No. 1220-E., dated the 8th July 1908, the total strength of the Imperial Engineer cadre is determined by the number of superior posts to be filled by Imperial engineers. It was stated in that letter that in order to fill 100 such posts with officers of over seven years' service, and to allow for the filling of leave vacancies, a strength of 178 officers was necessary. Since then the period for which an officer must serve before he becomes eligible for promotion to a superior post has, by the orders contained in the Government of India, Public Works Department, Resolution No. 439—458-E., dated the 15th May 1912, been extended to 10 years, and consequently a larger number of officers will now be required to fill the same number of posts. It has been calculated that under the new conditions of service a total strength of 211 Imperial officers, of whom 125 will be over 10 years' service, is required for every 100 superior posts. The total strength of the Provincial Engineer Service throughout India is at present fixed at 280 officers, of whom, it is calculated, 148 will be officers of over 10 years' service. Of the 280 officers, 30, as explained in paragraph 3 of Sir Lionel Jacob's letter of 8th July, 1908, form the share of the Bombay Presidency, and of the latter 16 will be officers of over 10 years' service. In order to admit of an equitable flow of promotion to superior posts, it has been estimated that under the new conditions of service 133 superior posts should be provided for the Provincial Engineer Service. The proportion of superior posts to be filled eventually by the members of that service in the Bombay Presidency is therefore 14.

4. In determining the strength of the cadre the

Government of Bombay propose to take into account the probable requirements 25 years hence, when certain large works now in course of construction or in contemplation are expected to be completed. I am, however, to observe that the Secretary of State has laid down the principle that the permanent Engineer staff should be regulated by the ascertained requirements of the service for the discharge of the duties which may certainly be reckoned upon as recurrent year by year, irrespective of any new large undertakings, provision for which should be made when necessary by the employment of temporary Engineers. In accordance with this principle, no provision can at present be made in the cadre of the Engineer establishment in the Bombay Presidency for the permanent establishment which may eventually be required for the maintenance of works the estimates for the construction of which have not yet even been sanctioned, such as the Gokak canal, and the Sukkur Barrage and Rohri canal. Nor is it usual to make provision in the regular cadre for other than existing permanent superior charges. Thus provision can at the present time be made in the cadre only for the new Kolaba district. In regard to the two sanitary districts (northern and southern), the constitution of which has been recommended in your letter No. E.—5372, dated the 20th May 1913, I am to mention that the Government of India are considering these two new charges in connection with the general question of the increase of the Sanitary Engineering establishments throughout India, and their orders on this proposal will be communicated separately to the Government of Bombay.

5. It appears from paragraph 4 of your letter of the 23rd April 1913 that including the Kolaba district there are at present 35 permanent executive charges. Adding to these the two posts for special and extra divisions and the 9 permanent administrative posts (3 Chief Engineerships and 6 Superintending Engineerships), the total number of permanent superior posts in the Presidency amounts to 46. The strength of the cadre based on existing permanent charges should, therefore, in accordance with the principles mentioned in paragraph 4 above, be 98 officers, that is, two less than the number sanctioned in 1908; but in view of the large amount of construction work in the Bombay Presidency, and of the fact that more than one regular division will probably be required when the existing construction work is completed, there is of course no question of effecting any reduction.

6. I am accordingly to remit the case to the Government of Bombay and to request that their proposals may be reconsidered in the light of the foregoing remarks.

7. As regards the question of recruitment raised in paragraph 9 of your letter, I am to say that the number of Imperial Assistant Engineers to be recruited annually is determined with reference to the total strength of the Engineer cadre for the whole of India, and that this number is distributed among the various provinces with reference to the state of the cadre of each. This year three Imperial recruits will be posted to the Bombay Presidency and it is understood that two Provincial Assistant Engineers* have been appointed, making five recruits in all.

I have, &c.,
(Signed) R. P. RUSSELL,
Secretary to the Government of India.

ANNEXURE E.

No. E.—150 of 1914.

PUBLIC WORKS DEPARTMENT:

Bombay Castle, 7th January 1914.

From H. F. BEALE, Esq., M.INST.C.E., Secretary to the Government of Bombay, to the SECRETARY to the GOVERNMENT of INDIA, Public Works Department.

Establishments.

Sir, I am directed to acknowledge the receipt of Mr. leMaistre's letter No. E.—1608, dated 15th August 1913, and to reply as follows.

2. The Governor in Council accepts the decision of the Government of India that the charge allowance of Rs. 100 a month given to each of the Under Secretaries cannot as such be increased because it is

* One Indian College recruit confirmed.
One promoted Subordinate.

given only as a remuneration for the arduous and responsible nature of their duties.

3. But I am to state that when the Bombay Government in their Financial Department No. 3659 of the 7th October 1909, accepted the draft rules proposed by the Government of India in their letter, Finance Department, No. 3367-F. O. and A., dated 3rd July 1909, they appear to have not fully appreciated the effect of rule V.

4. In Mr. Deputy Secretary LeMaistre's letter now under reply it is practically affirmed that the new house allowance is all that can be granted to an officer to compensate him "for the extra cost of living in Bombay." I am to say that when the Government of Bombay submitted their house allowance scheme they based their figures of compensation entirely upon the calculated difference between what an officer paid as house rent and 10 per cent. of his pay. The grant of a presidency or local allowance on the other hand was given to compensate for the higher cost of living in Bombay, which is quite apart from the incidence of house rent, and is a heavy tax on bachelors as well as on married people. To abolish the latter compensation because the former has been brought up to the bare limit, which makes it serve its own purpose, is, this Government submits, much the same as to give a man a better house and deprive him of the adequate means of living in it.

5. When the Government of Bombay first submitted their proposals (in their Financial Department letter No. 1588, dated 13th April 1909) to the Government of India, they expressed their approval of the Bombay Committee's report and suggestions. In paragraph 5 of the letter a special stipulation was made that certain officers drawing local allowances should continue to draw them, and in paragraph 12 of the report the expression was used "these house allowances should be granted . . . in lieu of the house rent allowances now drawn by them."

The Government of India in their answering letter No. 3367, Finance Department, already referred to, took no exception to the above, and when the scheme subsequently received the sanction of the Secretary of State, the Government of Bombay, overlooking the effect of rule V, issued their Government Resolution No. 1045, Financial Department, dated 23rd March 1911. Statement II (a) on page 19 of that Government Resolution set out clearly the allowances admissible to certain officers, and it was not until May 1912, more than a year later, that any question on the subject arose. The Accountant General, Bombay, then referred to rule V and refused to pass the presidency allowance for the Under Secretary, Public Works Department, in addition to the new house rent allowance. In answer to Mr. Secretary Hill's letter No. E.—6043, dated 3rd July 1912, explaining the case, the Government of India, in their letter No. 1131-E., dated 10th October 1913, supported the Accountant General's view.

6. A reference to the Bombay notes and minutes underlying the whole case shows that this decision was unexpected and in opposition to the original proposals of the Government of Bombay. I am to attach a statement showing in detail how not only the Under Secretaries, Public Works Department, but also the other Public Works Department executive officers stationed in Bombay are affected by the above ruling. The result works out as follows:—

Public Works Department Officer.	Original allowances, married or single.	Presental-allowances M.= Married S.=single or wife at home.	Loss per annum.
Under Secretary	Rs. 2,940	Rs. M. 2,700	240
Executive Engineer, Presidency	2,940	S. 1,200	1,740
Assistant Engineer, Rs. 620 and upwards.	1,740	M. 1,500	240
Assistant Engineer, Rs. 500 to 580.	1,740	S. 0	1,740
Assistant Engineer, less than Rs. 500.	Same as Executive Engineer.	Executive Engineer.	
	360	M. 1,500	Gain 540
	360	S. 0	Loss 360
	840	M. 990	Gain 150
	840	S. 0	Loss 840

Thus with two small exceptions these officers on being admitted to the benefits of the new house allowance scheme incur a loss of from Rs. 240 to Rs. 1,740 per annum. Considering that the previous allowances were deemed insufficient and that the new scheme was designed to ameliorate the condition of Government officers living in Bombay, the fact that the Public Works Department officers actually lose more or less heavily by the concession referred to in Rule V is in the opinion of this Government somewhat disappointing.

7. The Governor in Council is convinced that when the Government of India wrote their Finance Department letter No. 638-Ex., dated 31st January 1907, inviting the Government of Bombay to prepare a scheme of house rent allowances for their Presidency town, it was not their intention to reduce the emoluments of men drawing comparatively low pay. In these circumstances I am directed to urge very strongly upon the Government of India the necessity of granting again the presidency and other allowances for the Public Works Department officers referred to, with a view to the removal of a very real and grievous hardship.

8. It appears that the Government of India anticipated the possibility of some modification of the conditions being required, because in their despatch No. 117, Finance Department, dated 26th May 1910, forwarding the scheme to the Secretary of State they wrote:—

"Paragraph 4. We enclose statements of the appointments which, as at present advised, we propose to admit to the scheme. They will be subjected to further scrutiny, particularly in respect of the withdrawal of local allowances sanctioned on account of the high cost of house rents in Bombay and are now sent up merely in order to afford an indication of the cost of the scheme."

In these circumstances I am to express a hope that they will take a favourable view of the present representation.

9. So far I have dealt with the principle of restoring the presidency allowance to the Public Works Department officers for the reasons stated. I am directed now to make a further representation to the effect that Rs. 100 per annum is a totally inadequate figure for the presidency allowance. To prove this I am to attach a copy of letter No. 4946, dated 13th June 1913, from Mr. A. H. Whyte, Executive Engineer, Presidency, a man of simple tastes, who is married and has a small family. His pay till last October was Rs. 850, and as his wife is in India he draws Rs. 125 average house-rent. Deducting income-tax and contribution to the General Provident Fund his net pay amounts to Rs. 847, while his expenses are shown to be Rs. 909 exclusive of doctor's bills and savings for passage home and for additions to furlough pay.

10. It is evident that unless an officer of this standing has a private income he must run into debt in Bombay, and Government cannot consider this a fair condition of service. The Executive Engineer, Presidency, has very onerous duties to perform and he must be specially selected for his capability and energy. The billet, far from being a prize for good officers, may rightly be regarded as an appointment to be shunned in the present circumstances.

11. There can be no doubt that the cost of living in Bombay, quite apart from house rent, has increased considerably in recent years, and the arguments as to dearth of living apply equally to the other Public Works Department officers in Bombay. I am therefore to recommend the following scale of presidency allowances as suitable for the various ranks:

	Pay.	Presidency allowance.
Executive Engineer, Presidency	Rs. 800 to 1,250 per mensem. 800 (usually)	Rs. 250 per mensem. 250
Under Secretaries who rank as Executive Engineers.		
Assistant Engineer	380 to 750	150

If the allowance be granted, I am to ask that it may be sanctioned with retrospective effect from the date mentioned opposite the name of each of the officers in the footnote.*

12. In conclusion, I am to summarise the proposals put forward by this Government as follows:—

(a) The presidency and other allowances previously given, excepting the old house rent allowance, should not be withdrawn from the Public Works Department officers, as the new house rent allowances were not designed to do more than replace the old house rent allowances in Bombay, which had been proved to be inadequate.

(b) The presidency or local allowances, which were previously limited to Rs. 100 per mensem, are (like the old house rent allowances) found to be insufficient, and should be raised to Rs. 250 for Executive Engineers and Rs. 150 for Assistant Engineers permanently stationed in Bombay.

I am to express the most earnest hope that the Government of India will be able to treat this case in a sympathetic manner, as the efficiency of the administration and the execution of the many important works in hand and projected in the City of Bombay must suffer, if officers are overwhelmed with private cares and difficulties in their everyday life.

I have the honour to be,

Sir,

Your most obedient servant,

H. F. BEALE,

Secretary to Government.

Accompaniment to above letter:—

No. 4946 of 1913.

From A. H. Whyte, Esquire, Executive Engineer, Presidency, to the Chief Engineer, Public Works Department, Bombay.

Executive Engineer's Office,

Public Works Department,

Bombay, 13th June 1913.

SIR,

I HAVE the honour to represent the following facts for the favourable consideration of Government.

2. I have now been serving for a period of 10 years in Bombay, first as Assistant Engineer under the Consulting Architect to Government and later as Executive Engineer, Presidency District, to which post I was appointed in March 1912 on a salary of Rs. 800 per mensem.

3. Up till now, the post of Executive Engineer, Presidency, has nearly always been held by an officer considerably senior in rank and consequently drawing a higher salary.

* Mr. A. H. Whyte, Executive Engineer, Presidency District, 13th March 1912; Mr. H. J. M. Consens, B.Sc. (Eng.), Executive Engineer and Under Secretary to Government, Public Works Department, Roads and Buildings Branch, 11th December 1912; Mr. E. M. Duggan, B.Sc. (Eng.), A.M.I.C.E., Executive Engineer and Under Secretary to Government, Public Works Department, Irrigation and Railways, 17th November 1912; Mr. J. C. Gammon, B.Sc. (Eng.), A.C.G.I., Assistant Engineer under the Consulting Architect to Government, 12th April 1913, with a short break of about a month when he was sent to Sind.

4. In my present position, my expenses are very much more than I would be likely to incur in the districts, and although I receive a House Rent Allowance of Rs. 125 $\frac{(80 + 170)}{2}$ average for the year, I find it quite impossible to live on my salary, as a statement of my average monthly expenses given below† shows; and were it not for the fact that I have a small private income, I should be compelled to run into debt or ask for a transfer.

5. My total emoluments are Rs. 850 + 125, average House Rent, from which Income Tax of Rs. 22 is deducted, also my subscription to the General Provident Fund of Rs. 106, giving a net total of Rs. 847 per mensem. I am thus quite unable to save anything for going home for the benefit of my health, to see my child, or even to send my wife home or to the hills should necessity arise, and for other emergencies, such as Doctors' fees for my wife and family.

6. I do not think it will be denied that the cost of living in Bombay has increased very considerably in the last 10 years, especially house rent.

7. Mr. Hill gave me to understand that one of the reasons why I was chosen for the post was my long experience of Bombay and local conditions; but had I been allowed to remain on in Dhárwar District, I should certainly have been able to live within my pay and probably to have saved something.

8. Further, I should like to mention the case of Assistant Engineers stationed in Bombay. At the present moment, I have only one Assistant Engineer who is drawing House Rent and Local Allowance under the old scheme in addition to his salary; but should he be transferred out of Bombay—no matter for how short a period—he would, on returning to Bombay, be compelled to forego the allowances under the new rules or accept a smaller one in its place, if he be married. This applies to all Assistant Engineers posted to Bombay.

9. Assistant Engineers' expenses are greatly enhanced the moment they arrive in Bombay and unless they are assisted by means of a local allowance, say Rs. 150 per mensem, or by private means they are likely to get into debt.

10. I would respectfully request that Government will be pleased to sanction to all Executive and Assistant Engineers who may be stationed in Bombay, Local Allowances at the rates of Rs. 250 and 150, respectively, and in my own special case with retrospective effect from the date I took over charge of the office.

I have the honour to be,

Sir,

Your most obedient servant,

A. H. WHYTE,

Executive Engineer, Presidency.

	Rs.
For house rent	240
For servants	115
For food, coal, electric light, &c.	260
For clothing for self and family and upkeep of household linen	95
For schooling of child in Scotland	75
For conveyance	50
For club bills	25
For insurance premium	49
Total	909

APPENDIX XVII.

Memorandum prepared by the Administration of the Central Provinces and Berar relating to the Public Works Department.

1. The present regulations as to recruitment, training and probation, and whether these regulations are satisfactory.

(a) Imperial Service.—The Regulations for the appointment of officers to the Imperial Service of the Public Works Department are given as Appendix VIII of the Memorandum on the Department prepared by the Government of India for the Royal Commission.

(b) Royal Engineers.—Officers are selected from the

Corps of Royal Engineers on the Indian Establishment, and are appointed permanently at once in the 3rd or 2nd Grade of Assistant Engineers. Officers whom it is considered desirable to appoint to a higher grade than that of Assistant Engineer, 1st Grade, are posted as supernumeraries for a period of six months, after which a report is made as to their qualifications.

These officers are liable for recall to Military duty and form a War Reserve.

(c) *Provincial Service.*—The Regulations for the Provincial Service are contained in Appendix I of the Memorandum referred to above. The probationary period for qualified students is ordinarily one year.

(d) *Remarks.*—The system of recruitment, training, and probation at present in force is working satisfactorily on the whole, and the Officiating Chief Commissioner has no suggestions to make for its improvement.

The organisation of the service is, however, not on a satisfactory basis, and the system by which officers on the same list doing the same class of work are divided into Imperial and Provincial according as they are recruited in England or India is unsound.

The distinction between the two branches of the service proposed by the Public Service Commission of 1886, and introduced in 1892, was practically abandoned in the orders contained in Government of India, Public Works Department, Resolution No. 439—458-E., dated the 15th May, 1912, and the retention of the names Imperial and Provincial serves no useful purpose.

2. At the same time the training afforded by the Engineering Colleges in England is still superior to that which can be procured in India and will continue to be so for many years to come. This is due partly to the superior equipment of those Colleges, and so far as this defect is concerned, it would no doubt be possible to provide a remedy by establishing a fully equipped Engineering College in India. Such a College will not, however, succeed in producing Engineers on a large scale equal to those that can be trained in England, for in industrial development India is far behind England, and it is the industrial development of a country with its large demand for trained Engineers and its opportunities for their practical training more than the equipment of the College that secures a highly trained Engineer. Until, therefore, the industries of India have expanded more than they have done at present, it seems improbable that the best of the Indian trained Engineers will be equal to the best of those trained in England, and as the presence of Engineers trained in the best school available is essential to the maintenance of the high efficiency of the service, it is, in Mr. Crump's opinion, desirable to continue to recruit a certain proportion of the higher branch of the Public Works Department from England.

It is also desirable to employ members of the Corps of Royal Engineers in the service as a convenient way of maintaining the War Reserve required for Military purposes.

The balance of the Engineers required to complete the cadre would be recruited direct from the Engineer-

ing Colleges in India and in every exceptional cases by promotion from the subordinate ranks.

It appears from page 8 of the Memorandum prepared by the Government of India on the Public Works Department that at present the number of vacancies occurring each year is about 37 and that these are filled as follows:—

20 (including 10 per cent. of Indians) recruited in England.

14 recruited in India, 9–10 in alternate years by direct appointment from Indian Colleges.

3 from Royal Engineers.

These proportions are at present suitable, though when the expansion of industries in India leads to an increased demand for Engineers for private employ in India and an improvement of the supply of locally trained Engineers, it will no doubt be possible to replace a portion of the Engineers recruited in England by men trained at the Indian Colleges.

The question of the rates of pay and allowances and the rules for leave and pension for officers recruited in England and India, depends not on the fact that the majority of the former are English and of the latter Indian, but on the market value of their services. Engineers trained in English Colleges are to be found in every part of the world, and have a far larger field of employment open to them than those trained in Indian Colleges, and are thus able to command a higher price in the market. Many Engineers working in England earn far more than India can afford to pay, and those that are willing to go to Foreign Countries such as South America, or to the Colonies such as Australia or Africa, command a higher wage than their equals who stay in England.

If India, therefore, wishes to obtain any portion of its Engineering staff from England, as it must for many years to come if efficiency of the service is to be maintained, it must be prepared to pay for them, and the rates of pay recently sanctioned for the Imperial Service require no change. It applies equally to all, whether English or Indian. At present the members of the Provincial Service, who are recruited in India, are paid at approximately two-thirds of the rate of pay sanctioned for those recruited in England until they rise to the rank of Chief Engineer. Owing to the absence of any large demand for their services outside Government employ, their present market value is less than that of the Engineers trained in England, and the present rates of pay require no alteration, except that on selection as Superintending Engineer both classes should be paid alike, for such selection shows that their market value has become the same.

2. The rates of pay and allowances in force in 1890 and 1900 and at the present time, and whether the present rates of pay and allowances are satisfactory.

The rates of pay and allowances in 1890, 1900, and at the present time are given below:—

(a) Imperial Service.

1890.		1900.		1913.	
Rank.	Pay.	Rank.	Pay.	Rank.	Pay.
	Rs.		Rs.		Rs.
Chief Engineer—		Chief Engineer—		Chief Engineer (a)—	
1st Class	2,500	1st Class	2,500	1st Class	2,750
2nd "	2,000	2nd "	2,500	2nd "	2,500
3rd "	1,800	3rd "	1,800		
Superintending Engineer—		Superintending Engineer—		Superintending Engineer—	
1st Class	1,600	1st Class	1,600	1st Class	2,000
2nd "	1,350	2nd "	1,400	2nd "	1,750
3rd "	1,100	3rd "	1,250	3rd "	1,500
Executive Engineer—		Executive Engineer—		Executive Engineer (b)—	
1st Grade	950	1st Grade	1,000	11th to 20th and following years of service.	800–50—1,250
2nd "	800	2nd "	850		
3rd "	700	3rd "	700		
4th "	600				
Assistant Engineer—		Assistant Engineer—		Assistant Engineer—	
1st Grade	500	1st Grade	550	1st to 9th year of service...	380–40—700
2nd "	350	2nd "	450	10th year of service ...	750
3rd "	250	3rd "	350		
		Old 3rd Grade	250		
Apprentice Engineer ...	100				

(a)—1913—Local allowance Rs. 150 per mensem is drawn by a Secretary and Joint Secretary to Local Administration, vide paragraph 10 of Public Works Department Code, Volume I.

(b)—1913—Local allowance of Rs. 100 per mensem is drawn by Under Secretary to the Chief Commissioner, Public Works Department, Central Provinces.

(b) *Royal Engineers.*—In 1890 and 1900 Royal Engineer Officers in Civil employment in the Public Works Department might receive their net Military pay in addition to the pay of their Civil grade, or their staff salary plus Military pay and allowances. In 1913 Royal Engineer Officers who joined the Public Works Department after the 11th February 1910 draw pay at the rates given above for Imperial Engineers.

(c) Provincial Service.

1900.		1913.	
Rank.	Pay.	Rank.	Pay.
	Rs.		Rs.
Superintending Engineer—		Superintending Engineer—	
1st Class	1,050	1st Class	1,600
2nd "	900	2nd "	1,400
3rd "	750	3rd "	1,200
Executive Engineer—		Executive Engineer—	
1st Grade	650	11th year of service to 20th.	535–35–850
2nd "	550		
3rd "	475		
Assistant Engineer—		Assistant Engineer—	
1st Grade	400	1st year of service to 10th.	250–25–475
2nd "	350		
3rd "	250		
Apprentices	100	Apprentices	100

* NOTE.—Apprentice Engineers, other than qualified students appointed from the Thomason College, Rurki, may, after 6 months' satisfactory service, receive Rs. 150 per mensem.

A special increment of Rs. 50 may be granted by the Local Administration to a deserving Executive Engineer who, after completion of 5 years on the maximum pay of Rs. 850, is not promoted to Administrative rank.

The Provincial Service was organised in 1892.

For Chief Engineers of the Provincial Service the rates of pay are the same as those of the Imperial Service given above.

(d) *Remarks.*—Subject to the proposals made under head I for a reorganisation of the service and the fixing of the pay of officers recruited in India at two-thirds of that of those recruited in England, the present rates of pay are generally suitable. In the case, however, of Superintending and Chief Engineers, the present orders by which these posts are graded do not always work fairly. Superintending Engineers are appointed and promoted by the Local Government, but as an officer is ordinarily promoted to the rank of Superintending Engineer after 20 years' service, the division into classes may result in his never attaining the highest class before the time comes for him to retire. A time-scale would, in Mr. Crump's opinion, work more equitably, and he recommends the abolition of classes for Superintending Engineers, and that the pay of these officers be fixed at Rs. 1,500–100–2,000, with the proviso that no officer under 22 years' service should be eligible for increments even if appointed permanently as a Superintending Engineer.

In the case of Chief Engineers also, Mr. Crump is in favour of the abolition of the second class, and the pay of Chief Engineers being fixed at Rs. 2,750.

3. The number of posts in each grade, and the provision, if any, made in the cadre for leave and training.

The number of sanctioned posts is as follows (which includes a provision of one Superintending Engineer, one Executive Engineer and one Assistant Engineer for Central India):—

Post.	Number.
Chief Engineers (a)	2
Superintending Engineers	5
1st Class, 1.	
2nd Class, 2.	
3rd Class, 2 (b).	
Executive Engineers (c)	18
Assistant Engineers	16

(a) Including one Chief Engineer, 2nd Class, sanctioned for two years.

(b) Including one Superintending Engineer sanctioned for two years.

(c) Including one Executive Engineer sanctioned for the post of second Under Secretary, Public Works Department, for two years.

The sanctioned provision for absentees is 7 posts, or 20 per cent. of 35, which was the former strength of the Department, making a total sanctioned strength of 48, though the actual strength is at present 49.

The following statement shows the present distribution of the 49 posts between Imperial and Provincial:—

Rank.	Imperial.	Provincial.	Total.
Chief Engineer	2	—	2
Superintending Engineer ...	5	—	5
Executive Engineer	20	3	23
Assistant Engineer	8	11	19
	35	14	49

4. What appointments outside the authorised cadre are held, temporarily or otherwise, by officers of the service.

Outside the number of sanctioned posts detailed under the previous head, there is one post of Sanitary Engineer, Central Provinces, held by an Executive Engineer of the Public Works Department.

Besides the sanctioned cadre, Temporary Engineers, in numbers varying as occasion demands, are employed in the Department on pay ranging from Rs. 150 to Rs. 750 per mensem. At present 28 Temporary Engineers are entertained.

5. Whether any addition is required to the present cadre.

The existing scale of permanent establishment provides for:—

Roads and Buildings Branch—

One Chief Engineer.

Two Superintending Engineers.

Nine Divisional Charges.

One Under Secretary in the Public Works Department.

Irrigation Branch—

One Chief Engineer sanctioned temporarily for two years.

Two Superintending Engineers—one sanctioned temporarily for two years.

Four Divisional Charges.

One Under Secretary in the Public Works Department, sanctioned temporarily for two years.

This cadre, even including the appointments sanctioned temporarily, is not sufficient to carry on the large programme of work which the rapid development of the Province requires, and the necessity of a large increase of permanent establishment has been pressed frequently on the Government of India, and the proposals are only held in abeyance pending the Report of the Royal Commission on the Public Services.

Temporary Engineers should only be employed to carry out the construction of large works with which the permanent staff cannot deal, and all ordinary work and maintenance should be entrusted to the permanent staff, the strength of which should be fixed accordingly.

Taking first the supervising staff, with the large Irrigation works now under construction, such as the Tendula Canal, the Mahanadi Canal and the Weinganga Canal, the maintenance of which will have to be provided for, it is clear that the temporary appointments of a Chief Engineer, a Superintending Engineer and an Under Secretary which have been only sanctioned temporarily for two years, will be needed permanently.

The maintenance of these works and the construction of further Minor and Major Irrigation works of

APPENDIX XVII—continued.

which the Province stands in need and the maintenance of such works and of those already constructed will also require an addition to the existing four Divisions in the Irrigation Branch, and in 1910 and again in 1912 and in 1913 the Government of India were asked to sanction the creation of three new Irrigation Divisions with a staff of three Executive Engineers and three Assistant Engineers.

In the Roads and Buildings Branch the work of the Nagpur Division has increased so enormously that it has been found necessary to divide it into three Divisions, two with headquarters at Nagpur and one at Chanda. Two of these Divisions are at present only temporary, and in 1910 the necessity of making the Chanda Division permanent was pressed on the Government of India. Since then the pressure has increased, and Mr. Crump considers that with the large area of the Nagpur Division and the importance of its roads and buildings it will be necessary to make the third Division also permanent, if the principle that Temporary Engineers should be employed only as temporary additions to the permanent staff is to be maintained. Two Executive Engineers and two Assistant Engineers are therefore required in the Roads and Buildings Branch.

The permanent additions to the Cadre now needed are:—

Chief Engineer ... 1 At present sanction exists for two years only with effect from the 12th November, 1912.

Superintending Engineer ... 1 Sanctioned for two years only which will expire in November 1914.

Executive Engineers 6 Including one Executive Engineer sanctioned for Under Secretary's post in the Irrigation Branch for two years from the 13th November, 1912.

Assistant Engineers 5

Total ... 13

Absentees at 20 per cent. ... 3

Total Engineer officers required 16

APPENDIX XVIII.

STATEMENT, with details by PROVINCES, of the CIVIL APPOINTMENTS on Rs. 200 a Month and over held by EUROPEANS, ANGLO-INDIANS, and INDIANS on the 1st April, 1913, in the PUBLIC WORKS DEPARTMENT.

TOTAL STATEMENT.

Pay.	Number of Employés in each Grade or Class.															
	Total.	Europeans.	Anglo-Indians.	Hindus (including Sikhs and Parsis).				Sudras.	Other Hindus (i.e., other than those shown in cols. 5 to 9).	Total Hindus (cols. 5 to 10).	Sikhs.	Parsis.	Total Hindus, Sikhs and Parsis (cols. 11 to 13).	Muhammadians.	Indian-Christians.	Buddhists.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
Rs.																
200—300	224	31	27	72	13	16	22	6	9	138	5	2	145	11	7	3
300—400	117	38	13	14	11	7	11	5	6	54	4	1	59	5	2	—
400—500	147	68	18	20	9	6	7	—	5	47	4	3	54	4	2	1
500—600	103	84	3	5	3	1	1	1	—	11	—	1	12	2	2	—
600—700	111	93	1	6	4	—	3	1	—	16	—	—	16	—	1	—
700—800	57	47	3	3	—	2	—	—	—	6	—	1	7	—	—	—
800—900	51	47	1	1	—	—	—	—	1	2	—	—	2	—	1	—
900—1,000	27	25	—	—	—	1	—	—	—	1	—	—	2	—	—	—
1,000—1,200	60	42	2	7	—	4	2	—	—	15	—	—	15	—	1	—
1,200—1,400	93	66	7	11	—	2	—	—	1	14	—	3	17	—	3	—
1,400—1,600	19	15	3	1	—	—	—	—	—	1	—	—	1	—	—	—
1,600—1,800	22	21	—	—	—	—	—	1	—	1	—	—	1	—	—	—
2,000—2,500	19	15	2	—	—	1	—	—	—	1	—	—	1	—	—	—
2,500—3,000	16	16	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total ...	1,066	608	80	140	40	40	46	14	27	307	13	12	332	23	19	4

APPENDIX XVIII—continued.

DETAILS OF PROVINCES.

I.—Madras.

Number of Employés in each Grade or Class.

Pay.	Total.	Europeans.	Anglo-Indians.	Hindus (including Sikhs and Parsis).				Sudras.	Other Hindus (i.e., other than those shown in cols. 5 to 9).	Total Hindus (cols. 5 to 10).	Sikhs.	Parsis.	Total Hindus, Sikhs and Parsis (cols. 11 to 13).	Muhammadians.	Indian-Christians.	Buddhists.
				Brahmans (including Shenvis).	Kshatriyas.	Kaiyasthas (including Prabhus).	Baniyas and Vaisyas.									
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
Rs.																
200—300	45	8	3	28	—	—	—	3	—	31	—	—	31	—	3	—
300—400	17	4	2	5	—	—	—	4	—	9	—	—	9	—	2	—
400—500	21	8	2	9	—	1	—	—	1	11	—	—	11	—	—	—
500—600	14	10	—	3	—	—	—	1	—	4	—	—	4	—	—	—
600—700	11	9	—	2	—	—	—	—	—	2	—	—	2	—	—	—
700—800	6	5	—	1	—	—	—	—	—	1	—	—	1	—	—	—
800—900	4	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
900—1,000	5	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1,000—1,200	9	7	—	1	—	—	—	—	—	1	—	—	1	—	1	—
1,200—1,400	20	16	—	3	—	—	—	—	—	3	—	1	4	—	—	—
1,400—1,600	3	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1,600—1,800	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2,000—2,500	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2,500—3,000	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total ...	161	85	7	52	—	1	—	8	1	62	—	1	63	—	6	—

II.—Bombay.

Pay.	Total.	Europeans.	Anglo-Indians.	Hindus (including Sikhs and Parsis).				Sudras.	Other Hindus (i.e., other than those shown in cols. 5 to 9).	Total Hindus (cols. 5 to 10).	Sikhs.	Parsis.	Total Hindus, Sikhs and Parsis (cols. 11 to 13).	Muhammadians.	Indian-Christians.	Buddhists.
				Brahmans (including Shenvis).	Kshatriyas.	Kaiyasthas (including Prabhus).	Baniyas and Vaisyas.									
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
Rs.																
200—300	49	6	2	18	5	3	8	—	2	36	—	2	38	—	3	—
300—400	16	6	—	5	2	—	1	—	1	9	—	1	10	—	—	—
400—500	22	11	2	4	2	—	—	—	—	6	—	3	9	—	—	—
500—600	20	15	—	1	1	—	—	—	—	2	—	1	3	1	1	—
600—700	17	15	—	1	—	—	—	—	—	1	—	—	1	—	1	—
700—800	7	5	—	1	—	—	—	—	—	1	—	1	2	—	—	—
800—900	10	8	1	—	—	—	—	—	—	—	—	—	—	—	1	—
900—1,000	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1,000—1,200	5	2	—	—	—	1	—	—	—	3	—	—	3	—	—	—
1,200—1,400	11	5	—	5	—	—	—	—	1	6	—	—	6	—	—	—
1,400—1,600	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1,600—1,800	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2,000—2,500	3	2	—	—	—	—	—	—	—	—	—	—	—	1	—	—
2,500—3,000	3	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total ...	168	83	5	36	11	3	10	—	4	64	—	8	72	2	6	—

III.—Bengal.

Pay.	Total.	Europeans.	Anglo-Indians.	Hindus (including Sikhs and Parsis).				Sudras.	Other Hindus (i.e., other than those shown in cols. 5 to 9).	Total Hindus (cols. 5 to 10).	Sikhs.	Parsis.	Total Hindus, Sikhs and Parsis (cols. 11 to 13).	Muhammadians.	Indian-Christians.	Buddhists.
				Brahmans (including Shenvis).	Kshatriyas.	Kaiyasthas (including Prabhus).	Baniyas and Vaisyas.									
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
Rs.																
200—300	21	2	3	8	—	5	1	1	1	16	—	—	16	—	—	—
300—400	13	4	2	2	—	3	1	—	1	7	—	—	7	—	—	—
400—500	13	7	2	2	—	1	—	—	—	4	—	—	4	—	—	—
500—600	5	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
600—700	3	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
700—800	3	2	—	1	—	—	—	—	—	1	—	—	1	—	—	—
800—900	4	3	—	1	—	—	—	—	—	1	—	—	1	—	—	—
900—1,000	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1,000—1,200	4	2	—	—	—	1	—	—	1	2	—	—	2	—	—	—
1,200—1,400	6	1	3	1	—	—	—	—	—	2	—	—	2	—	—	—
1,400—1,600	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1,600—1,800	4	3	—	—	—	—	—	1	—	1	—	—	1	—	—	—
2,000—2,500	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2,500—3,000	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total ...	81	37	10	15	—	11	2	2	4	34	—	—	34	—	—	—

APPENDIX XVIII.—continued.

IV.—*Bihar and Orissa.*

Pay.		Number of Employees in each Grade or Class.															
		Total.	Europeans.	Anglo-Indians.	Hindus (including Sikhs and Parsis).										Muhammadans.	Indian Christians.	Buddhists.
					Brahmans (including Shenvais).	Kshatriyas.	Kaiyasthas (including Prabhus).	Baniyas and Vaisyas.	Sudras.	Other Hindus (i.e., other than those shown in cols. 5 to 9).	Total Hindus (cols. 5 to 10).	Sikhs.	Parsis.	Total Hindus, Sikhs and Parsis (cols. 11 to 13).			
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	
Rs.																	
200-300	15	—	—	9	—	3	1	1	1	15	—	—	15	—	—	—	
300-400	9	4	1	—	1	1	1	—	—	4	—	—	4	—	—	—	
400-500	10	3	2	1	1	1	—	—	2	5	—	—	5	—	—	—	
500-600	6	3	—	1	—	1	—	—	—	2	—	—	2	—	1	—	
600-700	9	4	—	1	—	—	2	—	2	5	—	—	5	—	—	—	
700-800	2	—	1	—	—	1	—	—	—	1	—	—	1	—	—	—	
800-900	2	1	—	—	—	—	—	—	—	1	—	—	1	—	—	—	
1,000-1,200	6	4	—	1	—	1	—	—	—	2	—	—	2	—	—	—	
1,200-1,400	4	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
1,400-1,600	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
1,600-1,800	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
2,000-2,500	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
2,500-3,000	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total ...	70	30	4	13	2	8	1	1	7	35	—	—	35	—	1	—	

V.—*The United Provinces of Agra and Oudh.*

Rs.																
200-300	43	5	8	4	3	4	8	1	2	22	—	—	22	8	—	—
300-400	25	10	2	—	—	—	6	—	2	8	1	—	9	4	—	—
400-500	29	14	2	1	2	3	4	—	1	11	—	—	11	1	—	—
500-600	19	16	1	—	—	—	1	—	—	1	—	—	1	1	—	—
600-700	16	12	—	3	—	—	—	1	—	4	—	—	4	—	—	—
700-800	11	9	1	—	—	1	—	—	—	1	—	—	1	—	—	—
800-900	7	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—
900-1,000	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1,000-1,200	8	6	—	—	—	2	—	—	—	2	—	—	2	—	—	—
1,200-1,400	16	11	1	1	—	—	—	—	—	1	—	1	2	—	2	—
1,400-1,600	3	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1,600-1,800	3	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2,000-2,500	2	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—
2,500-3,000	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total ...	186	101	16	9	5	10	19	2	5	50	1	1	52	15	2	—

VI.—*Punjab.*

Rs.																
200-300	14	3	1	—	4	—	3	—	—	7	1	—	8	2	—	—
300-400	18	3	—	1	6	2	1	—	1	11	3	—	14	1	—	—
400-500	23	8	—	2	4	—	2	—	—	8	4	—	12	2	1	—
500-600	18	15	1	—	2	—	—	—	—	2	—	—	2	—	—	—
600-700	33	28	1	—	3	—	1	—	—	4	—	—	4	—	—	—
700-800	14	14	—	—	—	—	—	—	—	—	—	—	—	—	—	—
800-900	14	14	—	—	—	—	—	—	—	—	—	—	—	—	—	—
900-1,000	9	8	—	—	—	—	—	—	—	—	—	1	1	—	—	—
1,000-1,200	14	10	2	—	—	—	1	—	1	2	—	—	2	—	—	—
1,200-1,400	17	15	—	1	—	1	—	—	—	2	—	—	2	—	—	—
1,400-1,600	5	2	3	—	—	—	—	—	—	—	—	—	—	—	—	—
1,600-1,800	4	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2,000-2,500	6	5	1	—	—	—	—	—	—	—	—	—	—	—	—	—
2,500-3,000	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total ...	191	131	9	4	19	3	8	—	2	36	8	1	45	5	1	—

APPENDIX XVIII—continued.

VII.—*Burma.*

		Number of Employés in each Grade or Class.														
Pay.	Total.	Europeans.	Anglo-Indians.	Hindus (including Sikhs and Parsis).										Muhammadans.	Indian Christians.	Buddhists.
				Brahmans (including Shenvis).	Kshatryas.	Kaiyasthas (including Prabhus).	Bamiyas and Vaisyas.	Sudras.	Other Hindus (i.e., other than those shown in cols. 5 to 9).	Total Hindus (cols. 5 to 10).	Sikhs.	Parsis.	Total Hindus, Sikhs and Parsis (cols. 11 to 13).			
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
Rs.																
200—300	27	6	8	2	1	—	1	—	—	4	4	—	8	1	1	3
300—400	11	6	5	—	—	—	—	—	—	—	—	—	—	—	—	—
400—500	16	10	5	—	—	—	—	—	—	—	—	—	—	—	—	1
500—600	13	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—
600—700	14	14	—	—	—	—	—	—	—	—	—	—	—	—	—	—
700—800	10	9	1	—	—	—	—	—	—	—	—	—	—	—	—	—
800—900	8	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—
900—1,000	3	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1,000—1,200	7	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1,200—1,400	11	10	1	—	—	—	—	—	—	—	—	—	—	—	—	—
1,400—1,600	2	1	—	1	—	—	—	—	—	1	—	—	1	—	—	—
1,600—1,800	3	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2,000—2,500	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2,500—3,000	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total ...	129	94	20	3	1	—	1	—	—	5	4	—	9	1	1	4

VIII.—*Central Provinces.*

Rs.																
200—300	2	1	—	—	—	—	—	—	1	1	—	—	1	—	—	—
300—400	6	—	1	—	2	1	1	1	—	5	—	—	5	—	—	—
400—500	7	5	—	1	—	—	1	—	—	2	—	—	2	—	—	—
500—600	3	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
600—700	4	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
700—800	4	3	—	—	—	—	—	—	1	1	—	—	1	—	—	—
800—900	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
900—1,000	3	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1,000—1,200	6	3	—	3	—	—	—	—	—	3	—	—	3	—	—	—
1,200—1,400	6	4	—	—	—	—	—	—	—	—	—	1	1	—	1	—
1,400—1,600	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1,600—1,800	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2,000—2,500	2	1	—	—	—	1	—	—	—	1	—	—	1	—	—	—
2,500—3,000	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total ...	48	32	1	4	2	2	2	1	2	13	—	1	14	—	1	—

IX — *Assam.*

Rs.																
200—300	8	—	2	3	—	1	—	—	2	6	—	—	6	—	—	—
300—400	2	1	—	1	—	—	—	—	—	1	—	—	1	—	—	—
400—500	6	2	3	—	—	—	—	—	—	—	—	—	—	—	1	—
500—600	5	4	1	—	—	—	—	—	—	—	—	—	—	—	—	—
600—700	4	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
800—900	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
900—1,000	1	—	—	—	—	1	—	—	—	1	—	—	1	—	—	—
1,000—1,200	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1,200—1,400	2	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—
1,400—1,600	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2,500—3,000	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total ...	32	15	8	4	—	2	—	—	2	8	—	—	8	—	1	—

APPENDIX XIX.

APPENDIX XIX.

Indian Public Works Department and Indian State Railways.

Regulations as to Appointment of Assistant Engineers, 1914.

1. The Secretary of State for India in Council will, in the year 1914, make about 30 appointments of Assistant Engineers in the Public Works and State Railway Departments of the Government of India.

In making these appointments he will act with the advice of a Selection Committee, including at least one eminent representative of the Engineering profession.

2. Applications for the appointments must be made on a printed form to be obtained from the Secretary, Public Works Department, India Office, Whitehall, London, S.W., and to be returned so as to reach him not earlier than 1st February 1914,* and not later than Wednesday the 1st April 1914.

3. Candidates must have attained the age of 21 and not attained the age of 24 years on the 1st July 1914. To this rule no exception can be made.

[N.B.—Natives of India must obtain a certificate of age and nationality in the form explained in Annexure II. As the production of this certificate is a necessary condition of appointment, candidates are advised to procure it without delay. The certificate should be forwarded to the India Office together with the candidate's form of application or at the earliest subsequent opportunity.]

4. Every candidate, except as provided in Regulation 5, must be a British subject of European descent, and at the time of his birth his father must have been a British subject, either natural-born or naturalised in the United Kingdom. The decision of the Secretary of State in Council as to whether a candidate satisfies this condition shall be final. He must also be of good moral character and sound physique.

5. Natives of India who are British subjects, and are not qualified under Regulation 4, are eligible for appointment, and shall be selected to the extent of 10 per cent. of the total number of Assistant Engineers thus recruited, if otherwise duly qualified.

6. Candidates must produce evidence that they have either (1) obtained one of the University degrees mentioned in Annexure I.; or (2) passed the A.M.I.C.E. examination; or (3) obtained such other diploma or distinction in Engineering, as may, in the opinion of the Selection Committee, be accepted as approximately equivalent to the degrees mentioned.

It will be for the Selection Committee to decide in dealing with the applications, whether they will recommend any candidate under head (3).

7. It is preferred that candidates should have taken a college course and obtained one of the degrees mentioned in Annexure I. It is advisable that in addition they should have had at least one full year's practical experience of Civil Engineering under a qualified civil engineer at the time when they appear before the Selection Committee. Those whose qualifying diploma has been obtained without a college course should have had a full three years of such practical experience. In the event of any candidate being selected who has not, in the opinion of the Selection Committee, had sufficient practical experience, he may be required to undergo, after arrival in India, a year's probation in charge of works, and his final appointment will be made dependent upon the result of such probation.

8. Candidates must be prepared, if called upon, to attend at the India Office, at their own expense, for a personal interview with the Selection Committee, which will probably take place at the end of April or early in May 1914.*

9. They will further be required, before final appointment by the Secretary of State in Council,

* Applications from candidates not resident in the United Kingdom may be submitted before this date and since the India Office cannot undertake to correspond with candidates except by letter, such applications should be submitted as early as possible.

to appear, at their own expense, before the Medical Board at the India Office for examination as to their physical fitness for service in India.

The Regulations governing the physical examination of candidates for the Public Works and State Railway Departments of the Government of India are given in Annexure V.

*10. Selected candidates will also be required to satisfy the Secretary of State, in such manner as he may determine, of their ability to ride.

11. They will on appointment be provided with a free first-class passage to India and they will be expected to proceed thither about the end of September 1914.

Their pay will begin from the date of their landing in India, and, if they so desire, they will be able to obtain an advance of two months' pay, recoverable by monthly instalments of one-third of salary. Of this advance a proportion not exceeding one-half may be received in England, and the balance can be drawn in India.

12. They will enter the Service as Assistant Engineers, on a salary of Rs. 4,500 a year (equivalent to 304l. a year, when the rupee is at 1s. 4d.).

13. The instruments required by Assistant Engineers are supplied to them in India.

14. Particulars as to their prospects of pay, pension, &c., are contained in Annexures III. and IV.

India Office,
December 1913.

NOTE FOR THE INFORMATION AND GUIDANCE OF CANDIDATES.

The Selection Committee of 1906 drew attention to the subjects which were held to be of most importance for the Public Works Service, viz. :—

Pure Mathematics, including a knowledge of the differential and integral calculus.

Applied Mathematics.

Geometrical and Engineering Drawing.

Surveying and Geodesy.

Strength and Materials and Theory of Structures.

Hydraulics.

Heat Engines.

Materials used in Construction.

Building Construction.—Wood and metal work, limes and cements, and building with stone, brick, and concrete.

Knowledge of the principles of road-making, waterworks, sanitary and railway engineering. (Important.)

The Selection Committee were further of opinion that all candidates should have had some workshop training.

* Selected candidates will be examined by the Civil Service Commissioners as to their ability to ride, and will be required to obtain either—

(a) a certificate from the Civil Service Commissioners that they are able to ride well and to perform journeys on horseback; or

(b) a certificate from the Civil Service Commissioners of minimum proficiency in riding.

In the latter case they will be subjected, on their arrival in India, to such further tests in riding as may be prescribed by their Government.

Candidates are warned that the certificate of minimum proficiency in riding, without which they will not be allowed to proceed to India, is only granted to those who can qualify in a series of tests, which includes jumping.

The chief tests will be saddling and bridling; mounting and dismounting; trotting and cantering; riding at a trot without stirrups; riding at a trot with stirrups but without reins; jumping a hedge hurdle about 3 feet in height.

Although the examination will, in the main, be confined to these points, the examiner will not be debarred from applying any other tests which may appear desirable.

APPENDIX XIX—continued.

The following Announcement regarding the recruitment of the Public Works Department in future years is published for the information of intending candidates:—

The foregoing Regulations apply only to the appointment of Assistant Engineers in the permanent establishment of the Public Works Department in 1914, but it is the intention of the Secretary of

State for India in Council, as at present advised, to recruit the permanent establishment of the Department in succeeding years on the same general lines as those already laid down; see, however, Note to Annexure I.

The Secretary of State is unable to give any undertaking that the Regulations will remain unaltered in the future.

ANNEXURES.

ANNEXURE I.

LIST OF DEGREES REFERRED TO IN PARAGRAPH 6.

Note.—Certain modifications of this Annexure to be applicable to students entering on their University course after June 1914, are under consideration.

University of Oxford.—B.A. (with honours in the Engineering Science Final Honours School).

University of London.—B.Sc. (Engineering).

University of Cambridge.—B.A. Honours (Mechanical Science Tripos).

Univ. of St. Andrews.—B.Sc. (Engineering).

University of Glasgow.—B.Sc. (Engineering).

University of Edinburgh.—B.Sc. (Engineering).

Victoria University of Manchester (or Victoria University).—B.Sc. (with honours in Engineering), and B.Sc. Tech. in "Mechanical" or "Electrical" Engineering (Honours Division in the Final Examination).

University of Liverpool.—B.Eng.; provided the degree be obtained by passing the Examination of the University.

University of Leeds.—B.Sc. in Civil or Mechanical Engineering.

University of Sheffield.—B.E. (First Class in the Final Examination).

University of Birmingham.—B.Sc. (Engineering). Provided that the Engineering Matriculation Examination shall have been passed before entry upon any course of study which forms part of the Degree course; and that a regular course of study, occupying not less than three academical years, shall have been pursued between the passing of such Matriculation Examination and the passing of the Final Examination for the degree.

University of Dublin.—B.A.I.

Royal University of Ireland.—B.E. and M.E.

University of Wales.—B.Sc. (in the Department of Civil, Mechanical, or Electrical Engineering).

University of Durham.—B.Sc. in Civil, Mechanical, or Electrical Engineering or in Naval Architecture; provided that the Matriculation Examination for Engineering and Naval Architecture shall have been passed before entry upon any course of study which forms part of the degree course.

University of Bristol.—B.Sc. in Civil or Mechanical Engineering.

Other degrees.—Any other degree of a University or College in the United Kingdom which may hereafter be recognised by the Council of the Institution of Civil Engineers as exempting the holder from passing the examination for Associate Membership.

ANNEXURE II.

PARTICULARS REGARDING THE CERTIFICATE OF AGE AND NATIONALITY TO BE OBTAINED BY CANDIDATES WHO ARE NATIVES OF INDIA.

A.—Rules for Candidates born within His Majesty's Dominions.

1. A candidate who is resident in British India must obtain a certificate signed either (a) by the Secretary to Government (or his lawful deputy) of the province

in which his family resides, or (b) by the Commissioner (or his lawful deputy) of the District in which his family resides.

2. A candidate who is resident in a Native State must obtain a certificate signed by the highest Political Officer (or his lawful deputy) accredited to the State in which his family resides.

3. The certificate required must be in the following form:—

"I hereby certify that _____ has submitted the proofs of his birth detailed below,* and has satisfactorily shown that he was actually born on or about the date stated, viz., the _____ day of _____ 18____, at a place within His Majesty's dominions."
*(Here enter details).

and the nature of the evidence produced must be such as to satisfy the officer who issues the certificate.

4. The documentary evidence which a candidate may be expected to produce in order to obtain such certificate comprises:—

- The horoscope.
- Family books.
- Tradesmen's account books showing entries relating to the birth.
- The record of admission in the registers of the school in which the candidate was educated, and the record of the candidate's age at various periodical school examinations.
- If the candidate is matriculated, a certified copy of his application to the Registrar in Form A.

Oral testimony from persons able to give relevant evidence may also be taken.

5. If a candidate has proceeded to England without obtaining a certificate, the certificate may be granted to his father or guardian on production of the requisite evidence.

B.—Rules for Candidates not born within His Majesty's Dominions.

6. The rules are the same as the foregoing except that a candidate not born within His Majesty's dominions must also prove that he is the son or grandson of a person born in those dominions, and in his case the form of certificate must be not as in paragraph 3 above but as follows:

"I hereby certify that _____ has submitted the proofs of his birth detailed below* and has satisfactorily shown that he was actually born on or about the date stated, viz., the _____ day of _____ 18____, and that he was born at a place without His Majesty's dominions, but that he is _____ son _____ grandson of a person born in those dominions."
*(Here enter details).

ANNEXURE III.

PARTICULARS REGARDING THE INDIAN PUBLIC WORKS DEPARTMENT (EXECUTIVE BRANCH).

(The arrangements and salaries hereinafter described are subject to revision according to the requirements of the Service.)

1. The Engineer Establishment of the Indian Public Works Department consists of a staff of Engineers, military and civil, engaged on the construction and maintenance of the various public works undertaken by the State in India.

2. The permanent establishment of the Department is recruited from the following sources:—

- (1) Officers of Royal Engineers.
 - (2) Persons appointed to the Imperial Service by the Secretary of State by selection from the United Kingdom.
 - (3) Persons educated at the Government Civil Engineering Colleges in India, and appointed to the Provincial Services by the Government of India.
 - (4) Occasional admission of other qualified persons.
3. The various ranks of the Department are at present as follows:—

	Salary per Annum (Imperial Service). Rs.
Chief Engineer, First Class	33,000
Second Class	30,000
Superintending Engineer, First Class	24,000
Second Class	21,000
Third Class	18,000
Executive Engineer, 20th year of service	15,000
and following years	14,000
19th year of service	13,800
18th year of service	13,600
17th year of service	13,400
16th year of service	13,200
15th year of service	12,600
14th year of service	12,000
13th year of service	11,400
12th year of service	10,800
11th year of service	10,200
10th year of service	9,600
*Assistant Engineer, 9th year of service	9,000
8th year of service	8,400
7th year of service	7,920
6th year of service	7,440
5th year of service	6,960
4th year of service	6,480
3rd year of service	6,000
2nd year of service	5,520
1st year of service	5,040
and following years	4,560

4. The increments will be given for approved service only, and in accordance with the rules of the Department.

Exchange compensation allowance will not be granted to future entrants.

5. Promotions above the grade of Executive Engineer are dependent on the occurrence of vacancies in the sanctioned establishment, and are made wholly by selection; mere seniority is considered to confer no claim to promotion.

ANNEXURE IV.

PARTICULARS RELATING TO PENSIONS, PROVIDENT FUND, AND LEAVE.
(Not printed).

ANNEXURE V.

Regulations as to the Physical Examination of Candidates for Appointment to the Public Works Department of the Government of India.

Note.—These Regulations are published for the convenience of candidates and in order to enable them to ascertain the probability of their coming up to the required physical standard. But it must be clearly understood that the Secretary of State reserves to himself an absolute discretion to reject as unfit any candidate whom he may consider, after hearing the opinion of his medical advisers, to be physically disqualified for the public service; and that his discretion is in no respect limited by these Regulations.

It is not the practice to communicate to candidates who may be reported as physically unfit for service in India the reasons for the Medical Board's opinion.

* Officers of the Assistant Class will ordinarily pass into the executive class in the 11th year of service, but no Imperial Engineer may draw more than Rs. 9,600 per annum unless he holds charge of a division or a charge of equal importance.

General Physical Requirements.

1. A candidate must be in good mental and bodily health, and free from any physical defect likely to interfere with efficient performance of duty.

2. In the examination of candidates the Medical Board will apply the following table of correlation of age, height, and chest girth:—

Age.	Height without Shoes.	Chest.	
		Girth when expanded.	Range of Expansion.
21 and upwards	Inches.	Inches.	Inches.
	62½ and under 65	35	2
	65 " 68	35½	2
	68 " 70	36	2
	70 " 72	36½	2½
	72 and upwards	37	2½

3. *Measurement of Height.*—The candidate will be placed against the standard with his feet together, and the weight thrown on the heels, and not on the toes or outside of the feet. He will stand erect without rigidity, and with the heels, calves, buttocks, and shoulders touching the standard; the chin will be depressed to bring the vertex of the head level under the horizontal bar, and the height will be noted in parts of an inch to eighths. In the Indian Police Force a maximum height of 5 ft. 4 ins. is required, but in other Departments no fixed limit of height is imposed.

4. *Measurement of Chest.*—The candidate will be made to stand erect with his feet together, and to raise his hands above his head. The tape will be carefully adjusted round the chest, with its posterior upper edge touching the inferior angles of the shoulder blades, and its anterior lower edge the upper part of the nipples. The arms will then be lowered to hang loosely by the side, and care will be taken that the shoulders are not thrown upwards or backwards so as to displace the tape. The candidate will then be directed to empty his chest of air as much as is possible. This is best done by continuous whistling with the lips as long as sound can be produced. The tape is carefully gathered in during the process, and when the minimum measurement is reached it is recorded. The candidate will then be directed to inflate his chest to its utmost capacity. This maximum measurement will likewise be noted. The girth with the chest fully expanded and the range of expansion between the minimum and the maximum will then be recorded.

5. The hearing must be good.

6. The speech without impediment.

7. The teeth in good order, i.e., decayed or broken teeth must be properly stopped or crowned, and deficient teeth replaced by artificial teeth where necessary for effective mastication.

8. The chest must be well formed, the lungs and heart sound.

9. Rupture, hydrocele, varicocele, varicose veins in a severe degree, or other condition likely to cause inefficiency will disqualify a candidate, unless such condition is cured by operation.

10. The limbs, feet, and toes must be well formed and developed, with free and perfect motion of all the joints.

11. A candidate must have no congenital malformation or defect likely to interfere with efficiency.

12. A candidate must not be the subject of chronic skin disease.

13. Evidence of previous acute or chronic disease pointing to an impaired constitution will disqualify.

14. The Regulations as to the standard of vision required are shown separately for each department. In all cases of "colour blindness" a note of the same will be made on the candidate's papers.

Candidates may, if they wish it, undergo a preliminary examination by the Medical Board, which meets at the India Office every Tuesday, under the following conditions:—

(a) Applications must be addressed to the Under Secretary of State, India Office, Whitehall, London, accompanied by a fee of two guineas, and a statement as to the particular appointment which the candidate desires to obtain.

(b) Candidates must pay their travelling expenses.

(c) Candidates considered to be unfit by the Medical Board at this preliminary examination are not bound to accept its opinion, but may, at their own risk, continue their studies, with the knowledge that they will have to submit themselves for a final medical examination by the Medical Board, prior to the examination, or to their appointment.

(d) On the other hand, it must be distinctly understood that the preliminary examination by the Medical Board is held solely for the candidate's information, and that, if after that examination he is reported to be apparently fit, he has not on that account any claim to be accepted as physically fit when he presents himself for the final Medical Examination, upon which alone his acceptance or rejection will depend. Candidates may be considered fit for the Service at the preliminary examination, but may be found at the final examination to be unfit, either on account of some physical defect which did not exist or passed undetected at the preliminary examination, or for other reasons.

Regulations as to the Standard of Vision.

1. If myopia in one or both eyes exists, a candidate may be passed provided the ametropia does not exceed 3.5 D, and if, with correcting glasses not exceeding 3.5 D, the acuteness of vision in one eye equals $\frac{1}{2}$ and in the other $\frac{1}{3}$, there being normal range of accommodation with the glasses.

2. Myopic astigmatism does not disqualify a candidate, provided the lens, or the combined spherical and cylindrical lenses, required to correct the error of refraction, does not exceed 3.5 D; the acuteness of vision in one eye, when corrected, being equal to $\frac{1}{2}$, and in the other $\frac{1}{3}$, together with normal range of accommodation with the correcting glasses, there being no evidence of progressive disease in the choroid or retina.

3. A candidate having total hypermetropia not exceeding 4 D is not disqualified, provided the sight in one eye (when under the influence of atropine) equals $\frac{1}{2}$, and in the other eye equals $\frac{1}{3}$, with + 4 D glasses, or any lower power.

4. Hypermetropic astigmatism does not disqualify, provided the lens or combined lenses required to cover the error of refraction do not exceed 4 D, and that

the sight of one eye equals $\frac{1}{2}$, and the other $\frac{1}{3}$, with or without such lens or lenses.

5. A candidate having a defect of vision arising from nebula of the cornea is disqualified if the sight of one eye be less than $\frac{1}{10}$. In such a case the better eye must be emmetropic. Defects of vision arising from pathological or other changes in the deeper structures of either eye, which are not referred to in these rules, may exclude a candidate.

6. Squint or any morbid condition, subject to the risk of aggravation or recurrence, in either eye, may cause the rejection of a candidate. Any imperfection of the colour sense is a disqualification for appointment to the engineering branch of the Railway Department. In other cases the existence of imperfection of colour sense will be noted on the candidate's papers.

FOR ALL APPOINTMENTS UNDER THE INDIAN GOVERNMENT A DECLARATION, AS FOLLOWS, IS REQUIRED FROM CANDIDATES.

1. I.....declare upon honour that, to the best of my knowledge and belief, I am not at present suffering or affected with any form of disease or bodily infirmity, such as—

- (a) Disease of the heart or lungs.
- (b) Venereal disease.
- (c) Fits.
- (d) Rupture.
- (e) Varicocele or varicose veins.
- (f) Hydrocele.
- (g) Malformation.
- (h) Congenital defect.
- (i) Defective sight or hearing.
- (j) Loss of teeth.
- (k) Impediment in speech.
- (l) Gout or rheumatism.

2. That I have not to my knowledge any hereditary tendency or predisposition to mental or constitutional disease, such as—

- (a) Fits or insanity.
- (b) Cancer.
- (c) Consumption or scrofula.

3. That I will fully reveal to the Medical Board all circumstances within my knowledge that concern my health and fitness for the appointment for which I am a candidate.

4. That I have previously been examined by a Medical Board for the public service and was declared.....on the

Signature.....
Date.....

N.B.—A wilful mis-statement by a candidate will invalidate any subsequent appointment obtained.

APPENDIX XX.

Officials and non-officials who furnished written evidence to the Royal Commission in connection with their enquiry into the PUBLIC WORKS DEPARTMENT but who were not orally examined.

1. Rai Bahadur Bakhshi Sohan Lal, Member, Legislative Council, Punjab.
2. Rai Bahadur Lala Kanhya Lal, C.E., Retired Offg. Superintending Engineer, Punjab Public Works Department.
3. F. W. Schönemann, Esq., Superintending Engineer, Public Works Department, Punjab.
4. Lala Kashi Ram, Pleader, Chief Court, Punjab.
5. Rai Bahadur Ram Sarn Das, Member, Punjab Legislative Council.
6. Rai Bahadur Lala Sultan Singh, late Member of the Punjab Legislative Council, Reis and Magistrate, Delhi.
7. Lala Lajpat Rai, Pleader, Chief Court, Punjab; Lahore.
8. Chawalal Pradhan Lala, and two other Temporary Engineers.
9. S. Athim, Esq., A.M.I.C.E., Executive Engineer, Ganges Canal, Rurki.
10. Khan Bahadur Nawab Ashadulla Khan, Meerut.
11. J. W. Meares, Esq., M.I.C.E., Electrical Adviser to the Government of India.
12. Gazetted staff of the Thomason Civil Engineering College, Rurki (other than R.E. officers and officers of the Indian Educational Service).
13. Officers of the Public Works Department, Burma, appointed to the Imperial Branch from the Thomason Civil Engineering College.
14. C. A. Duncan, Esq., Assistant Engineer, Ramgarh, Hazaribagh District, Bihar and Orissa.
15. C. A. Marchant, Esq., Honorary Assistant Engineer, Bihar and Orissa.
16. R. E. Carter, Esq., Superintending Engineer, Orissa Circle, and eight other officers of the Public Works Department in Bihar and Orissa.

17. Lala Sukhbir Sinha, Muzaffarnagar.
18. W. J. Finniston, Esq., Executive Engineer, Bassein, Burma.
19. A. E. P. Rae, Esq., Assistant Secretary, Public Works Department, Burma.
20. The Anglo-Indian Association, Calcutta.
21. Babu K. C. Sen, Assistant Engineer, Sambalpur.
22. E. A. W. Phillips, Esq., M.I.C.E., retired Superintending Engineer, Burma.
23. The Indian Society of Civil Engineers.
24. W. R. Wells, Esq., Executive Engineer, Burma.
25. S. D. Pears, Esq., Superintending Engineer.
26. J. M. Lacey, Esq., Executive Engineer.
27. Fardunji C. Daraporvala, Esq.
28. Vasudeo Rajaram Gupta, Esq., and Chuitaman Sakharam Deole, Esq., Honorary Secretaries on behalf of the Deccan Sabha, Poona.

29. The Bombay Public Works Department, Upper Subordinates' Association, Poona City.
30. P. F. Plomer, Esq., A.M.I.C.E.
31. J. H. Sharpe, Esq., Executive Engineer (Supplementary Notes on his Written Statement, *vide* paragraph 8).
32. Lt.-Col. J. P. Blakeway, R.E., Superintending Engineer, 1st Circle, and four other R.E. officers.
33. Keshavlal S. Sanghani, Esq., Assistant Engineer, Bombay.
34. K. R. Godbole, Esq., Civil Engineer, Poona City.
35. Babu Motilal Ghosh, Editor, Amrita Bazar Patrika, Calcutta.
36. W. McM. Sweet, Chief Engineer, Public Works Department, Assam. Memoranda giving (1) views of a majority of Members of the Department belonging to Assam; (2) his own views.
37. Nanabhai Dayabhai Daru, Esq.

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