



ROYAL COMMISSION
ON
LABOUR IN INDIA.

EVIDENCE.

Vol. II.—Part 1.

PUNJAB, DELHI
and
AJMER-MERWARA.

WRITTEN EVIDENCE.

LONDON:
PRINTED AND PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE
To be purchased directly from H.M. STATIONERY OFFICE at the following addresses:
Astrakhan House, Kingsway, London, W.C.2; 120, George Street, Edinburgh;
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Price 10s. 6d. net.

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NOTE TO PART I.

In this part is reproduced the bulk of the evidence submitted to the Commission in the form of written memoranda in reply to the list of subjects circulated in August 1929. In preparing this volume the Commission have sought to retain all matter likely to be of permanent interest to students of the subject, and not available elsewhere. Material supplied to the Commission which has already been printed and published elsewhere has in general not been reproduced. Where memoranda have been abridged all considerable omissions have been indicated in the text.

TERMS OF REFERENCE.

"To inquire into and report on the existing conditions of labour in industrial undertakings and plantations in British India, on the health, efficiency and standard of living of the workers, and on the relations between employers and employed, and to make recommendations."

NOTE.—"Industrial undertaking" for the purpose of the Commission is interpreted as in Article I of the Washington Hours Convention, which is as follows:—

"For the purpose of this Convention, the term 'industrial undertaking' includes particularly:—

"(a) Mines, quarries, and other works for the extraction of minerals from the earth.

"(b) Industries in which articles are manufactured, altered, cleaned, repaired, ornamented, finished, adapted for sale, broken up or demolished, or in which materials are transformed; including shipbuilding and the generation, transformation and transmission of electricity or motive power of any kind.

"(c) Construction, reconstruction, maintenance, repair, alteration, or demolition of any building, railway, tramway, harbour, dock, pier, canal, inland waterway, road, tunnel, bridge, viaduct, sewer, drain, well, telegraphic or telephonic installation, electrical undertaking, gaswork, waterwork or other work of construction, as well as the preparation for or laying the foundations of any such work or structure.

"(d) Transport of passengers or goods by road, rail, sea, or inland waterway, including the handling of goods at docks, quays, wharves or warehouses, but excluding transport by hand."

* * * * *
The competent authority in each country shall define the line of division which separates industry from commerce and agriculture.

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* This word should be read as indicating generally the changes in composition of the labour staff of an undertaking.

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whether they were workers or passengers. Passengers were eliminated as far as justice would allow. The result was to give individuals enough pay without any appreciable rise in the cost of goods. The increased efficiency soon removed even the slight rise in the latter.

Rapid action was taken in all factories except Jubbulpore, and elsewhere there was little or no trouble. At Jubbulpore there was delay, and the superintendent was moved elsewhere.

This voicelessness of the Indian workmen makes the higher management ready to welcome labour unions. A union which will give the management coherent intimation of incipient grievances is invaluable. At the same time not every union can be welcomed, it must really represent the men, and have their interests at heart. If the union presses for abnormal privileges for one group, it is merely raising discontent elsewhere. The Indian workman is intensely shrewd. An analogy to his village system is easily followed. When reductions of staff become necessary, for example, they will instantly appreciate why their village cannot afford to keep more than two blacksmiths to look after 200 cattle. A union that brings this shrewdness to bear is invaluable, one that does not is damaging in the long run both to the management and workmen.

The question of recognition is complicated. For example, it is hard to expect a Government to recognize a union which definitely announces that one of its objects is to destroy that Government. At the same time if the union is reasonably sane, no difficulty is experienced in practice whether there is formal recognition or no. In any case the management, higher and lower, do meet union representatives and do hear their views, and such action is taken as is practicable.

APPENDIX I.

Technical and Vocational Training.

The whole of the various schemes now working in the factories are shown in extracts from the report made by the Master-General of the Ordnance in 1926 on his proposals for revision and improvement. Most of these recommendations have been carried out except as regards gazetted officers, which latter are still under consideration with the Secretary of State, and this part has been omitted as it will not apparently interest the Labour Commission.

Report on Vocational Training in the Ordnance Factories in India with proposals for Revision and Improvement.

Part I.—General; Part II.—Boy Artisans; Part III.—Apprentices; Part IV.—Apprenticeship training in individual factories; Part V.—Schools; Part VI.—Hostels; Part VII.—Financial proposals.

Abbreviations used.

R. F. . . . .	.. ..	Rifle Factory, Ishapore.
M. & S. F. . . . .	.. ..	Metal and Steel Factory, Ishapore.
G. & S. F. . . . .	.. ..	Gun and Shell Factory, Cossipore.
H. & S. F. . . . .	.. ..	Harness and Saddlery Factory, Cawnpore.
G. C. F. . . . .	.. ..	Gun Carriage Factory, Jubbulpore.
A. F. . . . .	.. ..	Ammunition Factory, Kirkee.
Cord. F. . . . .	.. ..	Cordite Factory, Aruvankadu (near Ootacamund).
Clo. F. . . . .	.. ..	Clothing Factory, Shahjahanpur.
M. G. S. . . . .	.. ..	Master-General of Supply (now Master-General of the Ordnance in India).
D. O. F. & M. . . . .	.. ..	Director of Ordnance Factories and Manufacture.

PART I.

General.

1. Vocational training has been carried on in various ways in ordnance factories since their inception. A revised apprenticeship scheme was sanctioned as lately as A. D. letter No. 1048-4 (O. 3), dated 19th January, 1924, but no attempt was made to place schools and boy artisan training on a satisfactory footing. The apprentice scheme has done good work, but experience has shown that it requires revision and pruning, while a co-ordinated, all-embracing scheme of vocational training, if now sanctioned, may lead to very successful results. It is hoped that this report will show that the authorities concerned are very whole-heartedly keen on making a success

and giving the inhabitants of India a chance to train in ordnance factories. Naturally, as practically the whole expense is borne by the army, the interests of the ordnance factories is the predominating feature, but there is no obligation for those trained to remain in the factories; so successful scheme must undoubtedly react wholesomely on India in general.

It will be noted that the additional expenditure asked for, both initial and recurring, is very small, compared with the importance of the results, which may be obtained.

2. Ordnance factories not only cover, a very wide field of production, but the products must be of a high standard, as in use they are subjected to severe conditions at a time when failure may be disastrous. Further, they are products of precision and inter-changeable, requiring accurately adjusted machinery, high grade tools, and work of a high degree of exactitude. As weight is a very important consideration, strength must be obtained by quality, not quantity of material. Taking steel as an example, this means that the material must be perfectly treated and subjected to physical, chemical and microscopic tests. The critical constants must be determined by the thermal curves. It is then forged at definite temperatures, normalized and macrographs taken to examine the flow of grain. It is then machined, and it is often necessary to relieve the stresses by annealings. It is hardened and tempered, the process being controlled by pyrometers. The results being checked by the Brinell impact test, tensile tests, photo-micrograph, etc. An equally careful and scientific procedure is required for other materials. This, however, is not now a laboratory, but a workshop operation, and in the hands of workmen who have to deal with expensive and delicate appliances.

To enable the best to be made of material as outlined above, experience and knowledge of a high degree are required, and this is brought to the workshop in the form of supervision. In old days, the good workman rose to foreman, but he would be quite incapable of supervising the processes mentioned above. Now, to properly exercise this supervision a comparatively high professional and scientific training is necessary, together with manual dexterity acquired by experience, and this is even more necessary in India than in other countries in view of the general low efficiency of the labour that has to be supervised. It is further obvious that supervision can now only be entrusted to the educated, and can be only efficiently exercised by men with long experience and training.

3. The above paragraph is an attempt to show very briefly why the ordnance factories have to engage their supervision in England, and why it is vitally necessary for them to educate and train men in India to enable English recruits to be replaced. This is the object of our apprentice schemes.

4. Further, as regards workmen, the Indian shows considerable intelligence, and has proved himself capable of work requiring the highest skill, but generally he is handicapped by lack of elementary education, and the average of skilled labour is very low and largely illiterate. Hence we also require to educate boys to become tradesmen, with highly developed manual skill, combined with sufficient elementary education to read and write English, to enable them to have access to engineering tables and data. This is the object of our boy artisan classes.

5. We require in factories :—(a) *Gazetted officers*, who must be men of high education, great technical knowledge, ripe experience and the necessary qualities to make leaders of men. It is seldom that they will be found by promotion from (b) *Foremen and others engaged in supervision* (see Part II). These men must be absolute experts at their trades to command respect from their workmen, combined with sufficient education to efficiently exercise the functions of supervision sketched in paragraph 1. Grit and personality are very important qualities; (c) *Skilled tradesmen* (see Part II).

6. We will now deal with these three grades in the reverse order.

PART II.

Skilled Tradesmen supplied by the Boy Artisan Class.

1. *Field of Recruitment and Numbers required.*—As far as possible, they should be sons of our workmen, and their numbers might be unlimited, both for the sake of the factories on mobilization and for the general good of India.

The numbers that can be entertained, however, depend on the load on the factories. If working at full output, a large number could be entertained, but working, as we are at present on reduced output, the numbers must be restricted both because of the reduced flow of work, and because too large numbers would mask production costs.

The existing numbers and the numbers recommended at present are :—

	R. F.	M. & S. F.	G. & S. F.	H. & S. F.	G.C.F.	A.F.	Cord. F.	Clo. F.	F. Total.
Existing	19	16	28	18	84	14	18	Nil.	197
Recommended	30	20	30	25	50	20	10	20	205

The M. G. S. should be empowered to raise these numbers to a maximum of 300, if time and experience show they can be absorbed without detriment to factory output.

2. *Education*—(a) *Theoretical*.—This will be compulsory for boy artisans in factory schools, which now require to be placed where necessary on a sound basis. This is a transferred subject, and the local education grants only finance a school to the same extent as money is provided by the local body, which is the factory. This question of schools being a lengthy one is dealt with in Part V. It must be understood that not only boy artisans are concerned, but the general question of workmen's children and half-timers working in the factory.

(b) *Technical*.—This should be practically in one trade or in one or two branches thereof, and the object is to produce skilled tradesmen, and from these in time higher grade of extra temporary supervision than is now obtainable.

(i) The training should normally be for 4 years, but in certain trades may be extended to 5 years, at the discretion of the superintendent.

(ii) There will be no obligation to employ or render service at the termination of the training.

(iii) Age of recruitment should not be less than 12 or more than 17, but each factory may fix its range at the discretion of the superintendent to suit the various trades it caters for.

(iv) There should be approximately 10 hours per week theoretical instruction in school, of as high a standard as the factory can provide or the boys assimilate. Where it is more convenient or efficient to give this in night schools, it may be done.

(v) A minimum of 6 hours a day to be spent in the shops *as soon as possible*, and as far as possible on production work.

(vi) Maximum pay as follows, but pay to be fixed by each factory superintendent to suit the circumstances of the station. Promotion to be based on proved earning capacity (but see note below) :—

1st year	8 annas per diem.
2nd " " " "	8 " "
3rd " " " "	10 " "
4th " " " "	12 " "
5th " " " "	14 " "

One anna extra per diem for good colloquial English, and a further one anna for reading and writing English. Further, in cases where boy artisans show great skill and proficiency, they may be placed on piece-work rates at the discretion of the superintendent. Eight annas a month to be contributed by each boy artisan to the schools. Eight annas a month to be passed to the credit of the boy artisan in a deferred pay fund, and only to be paid over to him on his completing his course to the satisfaction of the superintendent.

Note.—In cases where a lad who is already earning satisfactory money in one branch of a trade (e.g., milling) is changed over to another branch (e.g., slotting) for training, he should have his daily rate continued, whatever his earnings, for such period as it is considered by the Superintendent reasonable for him to take to attain the equivalent degree of skill.

3.—*Cost*.—Boy artisans have been trained in the ordnance factories for over 50 years, but no attempt has been made to definitely settle their status. They have been treated as unskilled workers and, as stated under apprentices, the fluctuating load on factories means constantly "hiring" and "dismissing" men. Whenever a new unskilled workman is taken on he is put on a daily rate, but for some time he costs an appreciable sum. Till he knows his work he spoils machines, materials and tools, and takes up the time of mistries and foremen in teaching him. This is part of inevitable expenditure against the factory.

Boy artisans are treated in the same way, and in some factories boy artisans soon earn their pay, but in others they do not.

For example, in the R. F. he is carefully selected, for 140 days he is attached to a selected skilled workman, usually a relative. After 140 days without pay, he gets his share of the profit or of this gang of two, or may be permitted to work alone, and very soon earns his pay.

In other factories, it is impossible to get boys to work without pay, and in some cases the workmen object to having them in their gangs.

Further, he has to go for two hours schooling, which deducts from his production.

No provision is made for theoretical tuition, books or apparatus.

Further, average lads may earn their pay, but the lads above the average, whom we specially want to train for the extra temporary supervision, require special arrangements, and often, in consequence, cannot earn their pay.

On the sanction of the apprentice scheme, some difficulty arose with regard to boy artisans as the accounts rightly contended that they did not all earn all their pay, and it was decided to charge, wherever possible, direct to production, and the balance to a special work order A.-67, which was the apprentice grant, and limited to Rs. 50,000, and already too small for the apprentice scheme.

Now, it is requested that the scheme may be regularized, and a definite sum sanctioned by Government as a maximum and placed at the disposal of the D. O. F. & M. for allocation to factories.

The factory allotment should be placed to a special work order Training of Boy Artisans, which will be debited with the pay of each boy, and credited with his productive out-turn, the account of each boy being kept separate. Taking a four years course as a normal, the average pay proposed works out at As. $\frac{3}{4}$ A=9½ annas per diem. Add 50 per cent. of the extra 2 annas allowed for English=1 anna. Average pay 10½ annas. As shown, any definite estimate for a fair charge direct to production is impossible, and a conservative guess may be 5 annas, leaving 5½ for indirect charge. Add ¼ anna for equipment, prizes, miscellaneous, making 6 annas in all. Taking working days at 24 a month, this works out to 9 rupees a month per boy artisan or Rs. 108 a year.

It must be understood that the whole is now borne by the factory, and the above is only a convenient method of watching results, and allocating to indirect charges or direct charges.

It is requested that this may be sanctioned up to a maximum of 300 boy artisans, provision being made in the budget for the actual numbers anticipated in the coming year. If experience shows a greater percentage can be charged direct to production, the budget provision can be altered.

Further, it is found that it is often very efficient to give a bonus to selected artisans for instructions, and sanction may be accorded for a bonus up to Rs. 4 per mensem to be given when considered necessary by the superintendent, and charged to the special work order.

PART III.

Apprentices.

1. *General.*—The existing scheme is as sanctioned in army department letter No. 1048-4 (O. 3), dated Simla, the 19th January, 1924, and has generally shown signs of success, but experience now enables us to more accurately define its scope, and make some improvements and alterations. The existing scheme is in some ways based on the system followed at the Royal Ordnance Factories, England.

2. *Object.*—It must be definitely understood that our object is to train men *who can build on their apprentice training, by work as improvers*, and ultimately fit themselves for chargemen, assistant foremen and foremen as their individual capacity and personality dictate. A few may rise to higher things, and provision is being made for these.

It will be understood that the opportunities, trades, standards, etc., possible, vary enormously in the different factories, and each must be considered separately, but there are some general principles common to all factories.

3. *Recruitment.*—Recruits are available in far greater numbers than our requirements or capacity for training, and in many cases we can demand a high educational qualification. The following principles should be laid down :—

(i) Apprentices will be recruited from every race and creed found suitable for performance of the work required. They will include a proportion of Europeans, Anglo-Indians, Mohammedans, Hindus, Sikhs, Punjabis, Madrasis, etc. It is most undesirable that any one class or caste should predominate.

(ii) Too great stress should not be laid on purely educational qualifications, and social standing, physique, health, character, skill at games, etc., must be considered. Candidates successful in the qualifying examination should be personally interviewed before final selection.

(iii) The entrance qualification should be generally a "sound general education." The exact qualifications to be fixed by each factory to suit their peculiar circumstances and to be sanctioned by the M. G. S.

(iv) *Period of Apprenticeship.*—To be five years, except in certain specialized trades (e.g., plumbing), where a longer or shorter period is required and is customary. Also the term is extensible in case of unavoidable sickness. It is to be sanctioned by D. O. F. & M.

(v) *Scope of Apprenticeship.*—"General Engineering Apprenticeship" to be limited to four factories—those at Ishapore, the Gun Carriage Factory at Jubbulpore and the Ammunition Factory, Kirkee. The other factories to have specialized apprentices. *Apprentices.*—Most of the apprentices at the Metal and Steel Factory will be "special."

(vi) *Pay.*—The maximum rates of subsistence pay, as at present sanctioned, are as follows, but rates may be fixed within this scale in each factory, to suit the circumstances of the locality and this will be sanctioned by the M. G. S.

					Rs.	
1st year	..	..	..	..	40	p.m.
2nd "	..	..	..	..	50	"
3rd "	..	..	..	..	60	"
4th "	..	..	..	..	70	"
5th "	..	..	..	..	80	"
6th "	..	..	..	..	100	"

} If housed by the State,
Rs. 20 p.m. to be deducted. (See, however, para. 5 below.)

10 per cent. of an apprentice's pay will be deducted and placed in the Post Office Savings Bank or a recognized deferred pay fund. It will only be paid to him if he completes the full apprenticeship to the satisfaction of the superintendent, and no other charges are outstanding against him.

(vii) *Rules.*—Conditions of service, indentures if any, rules, etc., to be based on a common principle, but to be drawn up to suit the individual needs of each factory and sanctioned by the M. G. S. as is done at present.

4. The present number of apprentices sanctioned is 290, and the existing number is 171 (1925).

I propose the following maximum numbers for the factories:—

R. F.	M. & S.	G. & S.	H. & S.	G. C. Fy.	A. F.	Cord F.	Clo. F.	Total
60	30	20	24	32	16	20	20	222

or allowing for contingencies, say 230.

I propose therefore that instead of the intricate rules existing, there should be a fixed grant of Rs. 22 per apprentice.

5. *Deduction of Rs. 20 p.m. for Rent.*—The present rule is that if an apprentice is housed in a hostel, a deduction of Rs. 20 on account of rent is made. This is regarded as a grievance. The rates of subsistence pay have been given with a view to a living wage for boys apprenticed a long way from their homes, and we propose to embrace all India. I strongly recommend this deduction should be done away with altogether, but if this is not approved it should be reduced to a nominal figure. It should be recognized that a subsistence pay is for a definite purpose, and all charges, such as rent, lighting, water tax and conservancy should be a book debit against training and not recoverable.

PART IV.

Consideration of the Conditions of Apprenticeship Training in individual Factories.

1. *General Engineering Apprentices—(a) R. F.*—This factory has gone far ahead of all others, and has a successful system of apprenticeship developed. The educational qualifications of applicants is high and so selection is easy, but it has the inherent disadvantage that up to date practically only Bengalis have been admitted. This is now being changed, and letters issued to all Governments in India to nominate candidates for the entrance examination.

This is the only factory which does and can aim at two classes of apprentices:—

(a) Student apprentices; (b) Trade apprentices.

Student Apprentices.—The entrance qualifications and entrance examination are fairly stiff. The object of the theoretical and practical training is to turn out lads for trades which require general engineering education. The apprentice will still require to work as an improver, but this time may be spent in any selected factory or workshop. He should rise rapidly to chageman and assistant foreman.

It is emphasised that the training of student apprentices does not mean the lads are being trained for gazetted ranks, but rather for trades such as draughtsmen, gauge, tool and fixing designers, etc., which require general professional engineering training. The training is intended to be of a standard which would enable a lad to compete for a Whitworth scholarship, if such existed in India. It must be recognized that attaining to higher posts is a matter of personal qualifications, including experience, and a certain few of the best will be eligible for further training.

Lads who cannot keep pace with the work will on the recommendation of the superintendent, be permitted to join the trade apprentice class. The number sanctioned is five per annum.

Trade Apprentices.—This is the general type of apprentice we cater for, and while learning one trade thoroughly, apprentices are given opportunities of learning a reasonable amount about allied trades (e.g., a toolmaker will be trained primarily as a fitter and turner, but will do a certain amount in smithy, pattern making, drawing office, etc.). It is intended the lads should be thoroughly useful tradesmen, so trained that the most ambitious and capable will not be handicapped by lack of technical knowledge from rising to the posts of foremen. This paragraph may be taken to apply to all trade apprentices in all factories. The R. F. is well equipped for high grade tool production and for plant maintenance, but otherwise has little machinery of a general engineering character and the trades which can at present be taken on are:—(1) Toolmakers; (2) Millwrights; (3) Blacksmiths; (4) Joiners and pattern makers.

The number sanctioned is the number necessary to bring the total number of apprentices at any given time up to 60. It will be seen that this scheme is very much more complete than possible in any other factory, and it is recommended that for the R. F. in addition to the Rs. 22 a month per apprentice, the following be sanctioned:—

	Rs.
(1) Hostel * superintendent at average pay 273	3,276 per annum
(2) Full-time lecturers at 273	6,552 ..
	9,828 ..

The monthly allowance will be required for the part-time services of members of the staff, equipment, etc.

Ten student apprentices have completed their training. Eight have been retained as improvers, one has obtained employment in the M. & S. F. and one in the inspection branch.

Four trade apprentices have passed out; one is employed in the M. & S. F. and two in the Calcutta Corporation, and one in the Stocking (woodwork) section of the factory.

(b) *M. & S. F.*—This factory has no apprentices at present, but a scheme is now under consideration. They will all be trade apprentices, and the following trades can be catered for:—(1) Non-ferrous worker; (2) Blacksmiths; (3) Steel rollers; (4) Moulders; (5) Electrical engineers; (6) Millwrights; (7) Toolmakers.

The apprentices will attend for theoretical work the class in the R. F. for the technical instruction of trade lads, and may be required to take such classes with the international correspondence schools as the superintendent may direct.

Note.—It has been found that very few, if any, Indians will take up apprenticeship at the M. & S. F. The work is very heavy and hot.

(c) *G. & S. F.*—The apprentices are of the class of trade apprentices, and carry out their theoretical training at the Calcutta Technical Evening School, and are given lectures of a semi-practical and technical nature by the factory staff.

There are at present 16 apprentices, and 10 have passed out. Two are supervisors in the factory. The rest were offered work as improvers, but selected to leave, and of these, six are known to have obtained appointments with engineering firms of repute.

(d) *G. C. F.*—The following trades are available for trade apprentices:—(1) Machine workers; (2) Fitters and erectors; (3) Smiths; (4) Moulders and pattern makers; (5) Carpenters; (6) Power station work.

Theoretical work is at present done by the factory staff. The present number is 36.

* See Hostels.

Seven have completed their course of training. One has been selected by the Central Provinces Government for a 3-year improver course with an engineering firm in England. Another has entered the Manchester Works of the Metropolitan Vickers Co. on a 2 years' scholarship. Three have been engaged by the factory, one in the inspection branch and one in the electrical department of the G. I. P. Railway. As this is a very promising field for apprenticeship, it is recommended that a hostel be built (*vide* Part VI). Further, this year for apprentice training, a physical and chemical laboratory has been provided in the main office block. The present allowance for a senior chemical instructor is 50 p.m. and a junior 25 p.m.—Rs. 900 per annum.

The work is done by two chemists on the factory staff, whose salaries less the above 900 are charged to works inspection. As they devote more than half their time to apprentice training, it is considered only fair that half their salaries, viz., Rs. 2,250 be charged to apprentice instruction being an increase of 1,350 per annum.

2. *Specialized Trade Apprentices*—(a) *Harness & S. F.*—Apprentices take the following courses:—

A. Tanning	..	..	..	..	..	4 years.
Currying	..	..	..	..	..	2 ..
B. Harness and saddlery	..	..	..	..	..	5 ..

Local arrangements are made for hostel accommodation. There are at present eight apprentices, only one has completed the course, and has gained a post in a local tannery. No alteration recommended.

(b) *A. F.*—There are at present 18 apprentices. Three have passed out, one being appointed to the factory, one has proceeded to England, and one has obtained employment in India. The trade apprentices at the A. F. do a general engineering training. A new scheme is now under consideration. The Poona Engineering College gives students a three years' course of theoretical and practical training in mechanical and electrical engineering, and then places them for two years with the Tata Iron and Steel Works, Jamshedpur; M. & S. M. Railway Workshops, Perambur; E. I. Railway Workshops, Jamalpur; B. N. Railway Workshops, Kharagpur; B. B. & C. I. Ry. Workshops, Ajmer.

It is proposed that the A. F. should become a training centre for these apprentices. It is thought the factory will get a far better trained apprentice at a reduced cost of training as the factory has very poor facilities for theoretical education. I recommend that the power to inaugurate this scheme be vested in the M. G. S., provided that the cost does not exceed that at present sanctioned for 16 apprentices allotted to the A. F., viz., pay as per Part III, paragraph 2 (vi), plus 22 per mensem per apprentice.

(c) *Cord. F.*—The trade apprentices are here necessarily specialized, and the object of training is to provide men who can be employed in a supervisory capacity in chemical works. The scope and numbers are consequently limited. Two years are devoted to machine tools, fitting, carpentry, smithy, repair and maintenance of electrical plant, steam boilers, and two years to practical operations involved in cordite manufacture (excluding the manufacture of nitro-glycerine). The rules, etc., are satisfactory, and no alteration is recommended.

This factory should be given Rs. 300 per mensem, till the number of apprentices reaches 14. It should also be given an initial grant of Rs. 3,000 per annum for three years to provide all the necessary equipment, etc., which starting a scheme involves.

(d) *Clo. F.*—This factory has only been recently taken over by the M. G. S. branch and rebuilt and reorganized. It has no schools, apprentices, boy artisans or welfare scheme.

PART V.

Schools.

Schooling for children of employees is imperative from the point of view of the moral obligation of the employer, and the ultimate efficiency of the factories. It will be seen from the following report on existing schools that the circumstances and success of the existing schools vary and seem greatly dependent on local initiative. Some have been built and supported or partly built and partly supported from the Workmen's Fine Fund which severely cripples the Fine Fund.

In certain cases there are no teachers, except volunteers from the staff.

Schools are required not only for boy artisans, but for the large number of half-timer boys working in the factories, and also for the children of workmen, or families living on the estate.

The existing situation in each factory will be reviewed separately, and the immediate needs to place the schools on a satisfactory footing noted. Education is a transferred subject, and the local Governments have assisted, but in some cases shortage of funds is, as usual, in the way.

I. R. F.—This is by far the most elaborate system and consists of:—

(a) The ordnance Village Infant School. For children below 8 years of age.

(See M. and S. F.)

(b) The ordnance Village Primary School. Provides a four years' course of primary education, especially adapted for requirements of an engineering career. It caters also for the M. and S.F. The boy artisans attend the school, and also special evening classes.

(c) Missing link—a technical school—dealt with afterwards.

(d) Continuation classes. These are held in the factory by Indian personnel, such as clerks, supervisors, draughtsmen, godown keepers, etc., and comprise such subjects as fitting, turning, English, elementary mathematics and are self-supporting.

2. *The Technical School.*—This is the missing link as under the existing system there is a break in the education of boys between the age of 12, when they leave the primary school, and the age of 15, when they join the factory.

It will also provide evening instruction for the purpose of raising the status of men in employment, which they cannot do at present. The school has only just been sanctioned. The capital cost will be Rs. 50,490.

Recurring Cost Rs. 540.

The Bengal Government have agreed to contribute Rs. 25,000 capital and Rs. 3,600 per annum,

3. *Staff of the Primary School.*—Towards this we receive a grant-in-aid for three years from the Bengal Government which covers the cost of staff (excluding part-time instructors, 40 rupees p.m. paid from the Fine Fund). Local Governments, as a rule, only pay half the cost and owners the rest, but the reason for their generosity is that they paid nothing to the cost of buildings and their grant-in-aid will be reduced to half in 1929. The Fine Fund also contributes a sum of about Rs. 1,000 per annum for electric light, equipment and prizes which should be really a Government contribution.

I recommend that the following expenditure should be sanctioned, viz., Rs. 1,500 p.a. at present, and Rs. 3,760 p.a. from 1929 onwards.

4. *Buildings.*—Excellent buildings exist, the funds for which were originally sanctioned from the Fine Funds of the R. F. and M. & S. F., but the M. & S. F. could provide no funds except for the Infant School, so the rest of the cost has fallen on the R. F. This consisted of:—

	Rs.
Buildings	about 12,000
Equipment	2,000

5. Inspectors' reports have been very satisfactory.

II. *M. & S. F.*—This factory has only a Primary School for boys and girls up to 8 years, which it shares with the R. F.

No funds are available, and expenses are met from the Fine Fund. An application to Government for Rs. 100 a month for the maintenance of the school in 1922 was held up pending the result of the Inchcape Committee recommendations. This was again held over in 1923 while the Inspector of Schools, Presidency Division, Calcutta, stated his allotment was only sufficient to meet existing grants.

I recommend a recurring grant of Rs. 1,000 per annum be sanctioned to cover cost of teachers, prizes, equipment, etc. Efforts will still be made to get a grant from the Bengal Government.

III. G. & S. F.—This factory has an Anglo-Vernacular School situated in the factory, and attended by 78 boys employed in it, including boy artisans (under 18).

The staff consists of six teachers and one secretary from the factory clerical staff, who receive no remuneration.

Extra expenses are met from the boy artisan fund. The boy artisans subscribe a monthly subscription of $\frac{1}{4}$ anna per rupee of pay, and thus support the school.

The services of the factory staff are hardly voluntary, and the system causes inconvenience and discontent.

I recommend that a permanent staff of three teachers on Rs. 60, 50 and 40 per mensem be sanctioned. The annual cost being Rs. 1,800 and Rs. 200 for equipment, prizes, etc., making an annual grant of Rs. 2,000 in all.

IV. G. C. F.—This is a more elaborate system. It consists of two schools, viz. :—
(a) Anglo-Vernacular and Middle School, including boy artisans and half-timers;
(b) Primary.

These two schools are housed in an excellent building, obtained by extending old buildings and consists of 9 rooms.

Finance—

	Rs.
Annual grant-in-aid—Boy Artisan and Anglo-Vernacular and Middle Schools—from Central Provinces Government	933
Annual grant-in-aid—Primary School—from the Central Provinces Government	808
Factory	1,020
Fees from boy artisan students	1,032
Fees from Anglo-Vernacular Middle and Primary School students ..	1,129
	4,922

Requirements.—For the last two years the lowest class has consisted of 80 boys. These are divided into two portions and occupy two rooms. Already this year 25 applications have been refused for want of room. Further, class VIII was formed this year, and there is one room short. Two additional rooms are required at an estimated cost of Rs. 3,000. Seven electric fans are required at a cost of Rs. 1,134.

The present factory contribution is Rs. 1,020, and it is recommended this be increased to Rs. 1,250 to meet the cost of replacement of furniture, equipment and up-keep of library.

V. H. & S. F.—There only exists a primary school which is held in some open sheds, and is attended by 29 boys employed in the factory, whose attendance is compulsory, and 44 children of workmen (who pay 8 annas a month).

It works in 3 shifts of 2 hours, each boy attending for 2 hours.

Finance.—Factory grant Rs. 600 per annum; United Provinces Government grant Rs. 576 per annum; each boy who earns over Rs. 6 a month is charged a fee of 8 annas.

There is an undoubted want of a better school and decent buildings. It is proposed to add an Anglo-Vernacular School, and the estimated cost of buildings and equipment is Rs. 14,000. Additional staff would be required, and though no details have yet been worked out, it is anticipated that Rs. 2,600 per annum would be sufficient.

VI. A. F.—Here the circumstances are very different. The whole schooling is done in the Alegaonkar Brothers Schools. These brothers were factory clerks who gave up their professions to start schools.

There are six day schools and seven night schools situated in Kirkee, and various suburbs and villages where the workmen dwell, and are partly financed by the local Government.

Factory boys who attend are given an increase of six pies per diem on the principle that an educated boy is of more value than an uneducated one.

Eight annas a month is collected from the pay of these boys and paid to the school. Last year the amount was Rs. 1,460.

The Fine Fund paid Rs. 2,000 to assist in new school buildings, and in 1926 Rs. 1,000 to maintenance. This factory has a large number of children of school-going age employed in the factory, viz., 524 (in 1925) out of which 246 were attending the Alegaonkar Schools.

I am of opinion that in addition to what the Fine Fund can afford, we should give Rs. 2,000 per annum, and a special grant of Rs. 5,000 to the Building Fund.

If more information is required regarding these excellent schools, it can be furnished.

VII. *Cord F.*—This factory only has a night school. Average attendance 70-75.

The staff is financed by a provincial grant.

The situation in Aruvankadu is somewhat different to most other factories, and after consultation with the local educational authorities, it is recommended that a Higher Elementary Anglo-Vernacular School be instituted. It is estimated that about 260 scholars will attend.

The local education authorities should provide half, so our expenses would be :—

	Rs.
Initial	16,500
Recurring	3,726

VIII. *Clo. F.*—This factory has recently been taken over by the M. G. S., and has no school or educational facilities, technical or otherwise.

I recommend there should be (a) Infant school for children under 8 ; (b) Anglo-vernacular school for boys over 8 and for boy artisans.

A rough estimate of the cost of the building is Rs. 20,000 and equipment Rs. 2,000.

Endeavours would be made to get the local Government to pay half the initial and recurring cost.

PART VI.

Hostels.

Hostels are required at the R. F., which will include accommodation for the apprentices of the M. and S. F. and at the G. C. F.

Rifle Factory.—Accommodation is required for 90 apprentices. At present two old war-time barracks provide accommodation for 20 each and 8 class X quarters which will be used for hostel superintendent, teachers, sick boys and six apprentices. Total available 46. So additional accommodation is required for 44 apprentices. The dormitory principle, which has been successful at Ishapore for six years, is recommended.

Three cook-houses with connected messes are required for (a) Mohammedans, (b) Hindus of Bombay and Madras, (c) Hindus of the rest of India. Ablution shed and drying rooms and latrine with water-borne sewage will be provided. Modest provision for a library is provided, and for health and recreation purposes a small gymnasium and 3 pucca tennis courts.

The rough estimate is taken at Rs. 3,400 per head, approximately Rs. 1,50,000. This includes equipment as follows :—Tennis courts, gymnasium, library, beds with mosquito poles, mosquito nets, chests of drawers, kit boxes, tables and stools.

G. C. F.—A hostel here is a necessity for the proper execution of a factory scheme.

(This hostel has not so far been built owing to scarcity of funds.)

APPENDIX II (abridged).

Sanctioned permanent establishment in the Indian Ordnance and Clothing Factories, and in Arsenals, Ordnance and Clothing Depots in India.

10 Factories.	Non-gazetted staff, e.g., Foremen, Assistant Foremen, etc.	Clerical establishment.	Medical establishment.	Miscellaneous.	Total.
(1) Metal and Steel Factory Ishapore	55	56	15	5	131
(2) Rifle Factory, Ishapore	59	38	—	—	97
(3) Ammunition Factory, Kirkee	63	43	1	—	107
(4) Cordite Factory, Aruvankadu	45	26	6	4	81
(5) Gun and Shell Factory, Cossipore	46	65	3	2	116
(6) Gun Carriage Factory, Jubbulpore	64	58	6	—	128
(7) Harness and Saddlery Factory, Cawnpore	37	44	2	—	83
(8) Clothing Factory, Shahjahanpore	21	28	2	22	73
(9) Clothing Factory, Madras	7	26	—	35	68
(10) Assembly Factory, Rawalpindi	5	3	—	—	8
Total	402	387	35	68	892
Arsenals (7)	7	381	—	35	423
Ordnance Depots (6)	—	80	—	23	103
Clothing Depots (3)	—	41	—	47	88
Total	7	502	—	105	614

208 permanent artificers are sanctioned for the various arsenals, and 22 clerks in addition to arsenals.

APPENDIX III.

Temporary Establishment.

Average present strength of Employees employed in the Indian Ordnance and Clothing Factories and Arsenals per diem.

	Skilled labour.	Unskilled labour.	Others (including clerical staff, etc.	Total.
<i>Factory.</i>				
(1) Metal and Steel Factory, Ishapore	970	1,250	313	2,533
(2) Rifle Factory, Ishapore	2,542	747	186	3,475
(3) Ammunition Factory, Kirkee ..	904	3,435	223	4,562
(4) Cordite Factory, Aruvankadu ..	115	561	45	721
(5) Gun and Shell Factory, Cossipore	1,782	418	345	2,545
(6) Gun Carriage Factory, Jubbulpore	1,453	1,253	118	2,824
(7) Harness and Saddlery Factory, Cawnpore	1,427	355	178	1,960
(8) Clothing Factory, Shahjahanpore	470	140	175	785
(9) Clothing Factory, Madras	147	125	36	308
(10) Assembly Factory, Rawalpindi ..	2	47	17	66
Total	9,812	8,331	1,636	19,779
<i>Arsenals.</i>				
(1) Rawalpindi	570	612	—	1,182
(2) Ferozepore	693	854	—	1,547
(3) Kirkee	521	430	—	951
(4) Allahabad	383	482	—	865
(5) Quetta	285	271	—	556
(6) Madras	264	271	—	535
(7) Mingaladon	200	250	—	450
<i>Ordnance Depots.</i>				
(1) Agra	78	150	—	228
(2) Bombay	8	136	—	144
(3) Cawnpore	4	104	—	108
(4) Drigh Road	14	50	—	64
(5) Fort William	125	142	—	267
(6) Lahore	13	334	—	347
<i>Clothing Depots.</i>				
(1) Shahjahanpore	10	254	—	264
(2) Madras	—	44	—	44
(3) Quetta	—	56	—	56
Total (Arsenals and Depots) ..	3,168	4,440	—	7,608

APPENDIX IV.

Analyses of the uneconomical effects of a large Labour turnover.

Tailors.

One tailor draws on piece-work 6 annas per unit of work done.

The standing charges for one day per tailor come in round figures to 12 annas a day.

A man who has had about 12 months' experience does 3 units a day, and there is definite evidence that with 3 years' experience he could do 4 units. If he does 3 units the cost is—

Piece-work rates	18 annas.
Standing charges	12 ..
	30 ..

or 10 anna per unit in all.

A new man only does $1\frac{1}{2}$ units at first and reaches 2 units after about a month's work, and the cost is—

Piece-work rates	..	..	..	..	12 annas.
Standing charges	..	..	..	..	12 ..
					24 ..

or 12 annas per unit.

The extra expense in consequence of having new hands is 2 annas per unit or $16\frac{1}{2}$ per cent. of the man's earnings. This loss occurs for at least six months, and means that 8 per cent. of the man's earnings are lost by each turnover of labour.

There is further but very small loss of material by spoilt work.

To maintain a force of 1,200 men last year 2,836 were engaged, stopped a short time and then left.

Cordite Rifle Pressing.

The machines can in theory do 73 cycles per shift.

A really trained man (12 months' experience) will get 72 cycles and a yield of $1\frac{1}{2}$ lbs. per cycle, equivalent to an output of 96 lbs. The cost of these 96 lbs. excluding material is—

Day work rate..	..	..	..	..	12 annas.
Standing charges	..	..	..	..	84 .. (700 per cent.)
					96 ..
					= 1 anna per lb.

An unskilled man will only get 64 cycles after a month, and a yield of $1\frac{1}{2}$ lbs., equivalent to 72 lbs. per shift.

The cost is the same as the skilled man's 96 lbs. or $1\frac{1}{2}$ annas per lb. The extra cost for an output of 960 lbs. is therefore 240 annas.

This means that each turnover of labour per year costs nearly 100 per cent. of the day workers' earnings per annum.

In addition there is a very appreciable loss by the expenditure of acetone and labour on reworking the waste; which would amount to about 1 anna per lb.

This is the case when the plant is fully loaded. In peace, however, the plant is half empty, and we rarely employ extra men, which means that the cost of 96 lbs. goes up to 100 annas or an increase of $33\frac{1}{3}$ on the man's day rate.

The turnover in this factory, which is only manned with a nucleus staff, is 10-15 per cent. per annum.

Cartridge Making.

One operation in this is drawing. This is done on a machine which can in theory do 108 strokes per minute.

Experience has shown we can only get 400 working minutes in a shift of $7\frac{1}{2}$ hours.

A really experienced hand will get 95 effective strokes per minute out of the machine, or a yield of 38,000 cases per day. He gets $\frac{1}{2}$ of an anna per 1,000 at piece-work rates, and costs are per 38,000.

Wages ..	..	..	..	..	12 $\frac{1}{2}$ annas.
Standing charges	..	..	..	..	25 $\frac{1}{2}$..
					38 ..
					or 1 anna per 1,000.

A new hand will only get 80 effective strokes per minute after one month's work, or an output of 32,000 per shift. These cost—

Wages ..	..	..	..	..	10 $\frac{1}{2}$ annas.
Standing charges	..	..	..	..	25 $\frac{1}{2}$..
					36 ..
					or $1\frac{1}{2}$ annas per 1,000 = 1.13.

In addition there are very heavy spoilt work charges; experience has shown that the difference in expenditure between new and old hands throughout is—

Old hands	..	..	..	..	..	275	cwts. per 1,000 cases.
New hands	..	..	..	..	..	315	'' '' ''
Difference	..	..	..	..	..	40	

This, however, has to be divided among 10 operations, and hence the loss for the one considered is per 1,000 cases—

$$.004 \times 90 \times 16 \text{ annas} = 5.76 \text{ annas.}$$

Rs. 90 is the loss in value for each cwt. of brass cups damaged. The total increase in cost is thus 5.92 annas per 1,000 cases, which is over 100 per cent. on the experienced man's earnings, and the full extent of this loss is felt on each change in labour for at least two months, and then rapidly diminishes. Turnover of labour in this group averages 25 per cent.

In these three groups of unskilled labourers the loss on each turnover of labourer comes to per annum—(a) Tailor group about 8 per cent. of the man's earnings; (b) Cordite group about 16 per cent. of the man's earnings; (c) Cartridge group over 100 per cent. of the man's earnings. This loss is distributed over expenditure on—(1) Increase of labour staff payments; (2) Wear and tear of plant; (3) Wastage of material used. American labour experts estimate that each new hiring costs 25 per cent. of the man's annual wages.

It is worth trying to stop this loss; the attempt can be made in two ways:—(a) by increase of labour rates, which is only of temporary effect, but requires no sanction. It would be relatively expensive, about 10 per cent. of the wages bill; (b) by a provident fund, which will cost about $2\frac{1}{4}$ per cent. of the wages bill at most. This has been suggested by the labour unions. Even if success is only very limited the savings which follow will recoup us, and in consequence I am prepared to certify that no extra cash is needed, though I cannot specify whether the actual saving will show by diminution of—(1) number of labourers, i.e., reduction of wages total bill; (2) reduction in amount of material expended; (3) reduction in indirect expenditure on repairs. If there is any appreciable saving as a result the army gets the benefit at the next periodic revision of P. V. S. rates.

APPENDIX VI.

Cost of Welfare Schemes in Ordnance and Clothing Factories in India.

N.B.—The figures are approximate.

Serial No.	Name of Measure.	Existing Buildings and Welfare Institutions.		Proposed Schemes.		Remarks.
		Initial.	Recurring per annum.	Initial.	Recurring per annum.	
1	Housing schemes	Rs. 9,22,800	Rs. 37,300	Rs. 62,96,000	Rs. 86,500	Approval of Government has been accorded to provision of quarters for about 50 per cent. of the labour strength of factories during peace time. The total cost of this scheme, which includes 3 hospitals and 4 schools, comes to Rs. 69.74 lakhs, out of which Rs. 8.78 lakhs has been spent during the past 6 years, and the balance, Rs. 62.96 lakhs, is still to be spent. Approximately Rs. 2 lakhs are provided annually for this scheme. In addition to Rs. 9.22 lakhs spent during the last 6 years on quarters for workmen a considerable amount has been spent spasmodically during the 100 years and more that the factories have been in existence.

APPENDIX VI.—contd.

Serial No.	Name of Measure.	Existing Buildings and Welfare Institutions.		Proposed Schemes.		Remarks.
		Initial	Recurring per annum.	Initial.	Recurring per annum.	
2	Factory Clubs for Indian employees	Ra. 14,280	Rs. 200	Rs. —	Rs. —	This is for the Ordnance, Indian Club at Ishapore.
3	Hospitals and dispensaries, including Maternity Wards.	1,25,000	(x) 82,000 (y) 1,720	(z) 84,400	470	(z) On hospital and dispensary staff and equipment. (y) Maintenance of hospital and dispensary buildings. (x) Initial cost of proposed 12-bedded hospital at G. C. Fy., Jubbulpore, for workmen and their families.
4	Dinner sheds and tiffin rooms for workmen, clerks, etc.	64,900	—	—	—	Rs. 59,200 spent from Government funds and Rs. 5,700 from the Fine Funds of the factories.
5	Co-operative Credit Societies Stores and other stores.	(a) 26,900 (b) 3,000	—	—	—	(a) Erected from Fine Fund at Rifle Factory, Ishapore. (b) Erected from Fine Fund at Harness and Saddlery Factory, Cawnpore.
6	Education of workmen's children.	(c) 1,30,700	(a) 37,660 (b) 1,530	—	—	(a) On school staff and equipment. Local Governments contribute Rs. 13,740 per annum towards this expenditure. (b) Maintenance of school buildings. (c) Cost of factory schools—Rs. 1,11,000 spent from Government funds and Rs. 20,000 from Fine Funds. Rs. 15,680 $\frac{1}{2}$ (cost) will be contributed by local Government towards cost of new school at Cordite Factory.
7	Provident fund for supervisors, clerks and workmen on temporary and extra temporary establishments.	—	—	—	1,15,900	
8	Grant of casual leave with pay to daily rated workmen and piece-workers.	—	—	—	2,10,000	
9	Free issue of ice, lemon, &c., to workmen employed on arduous work, such as on furnaces.	—	2,000	—	—	
10	Machinery, educational cinema plant and theatrical equipment for Technical School, Ishapore, and general instruction and entertainment of employees and their families.	5,250	—	—	—	Rs. 1,500 granted by His Excellency the Commander-in-Chief from funds at his disposal and Rs. 3,750 allotted from the Fine Fund of the Rifle Factory, Ishapore.
	Total ..	12,92,840	1,62,440	68,30,400	4,12,670	

APPENDIX VII.

Copy of Letter No. E-1024, dated 23rd May, 1919, from the Secretary, Indian Munitions Board (through the Director of Ordnance Factories), to the Secretary, Foreman's Association of India, Dum Dum, Calcutta.

I am directed to acknowledge your letter addressed to the President, Indian Munitions Board, No. M-5, dated 26th April, 1919, regarding the meeting which took place on the 31st March, 1919, between the Hon'ble Sir Thomas Holland and a deputation from the Association, when the question of the official recognition of the Foreman's Association of India was discussed.

2. Sir Thomas Holland has explained to your representatives that the attitude of Government towards such bodies as your own is a friendly one, and that there is no objection to their being officially recognized as representing in each case the class of Government employees concerned, subject to the observance of certain essential conditions. These conditions are:—

(a) That an Association can be recognized by Government only in so far as it represents a distinct class of Government employees employed under a single department of Government;

(b) that Government can recognize only associations which employ no paid officer who is not in the active service of Government, and belonging to that class of Government servants which the Association represents;

Exception.—This would not, however, preclude the employment as an office holder, of a pensioned officer of the same class.

(c) That an Association shall be allowed to represent the interests of a class but not of an individual; the representation of the interests of a class may cover questions relating to conditions of work such as remuneration, hours of work, grant of leave and the like, which though they may relate directly to a single individual only, may also affect all the members or a group of members of the association concerned; but it does not give the association any right to represent individual cases in matters of discipline, promotion, transfer or extension or in any matter which can only affect a single member of the staff; such cases being dealt with by the ordinary memorial rule procedure, namely by application by the individual himself;

(d) that an association must correspond with Government through the regular official channel as prescribed for individual Government servants of the class represented. Obviously, this procedure prevents a source of delay in dealing with a representation.

3. I am to say that the Government of India accordingly agree to grant official recognition to your association, subject to the observance of the preceding conditions and will be pleased to accord it such support as is practicable in its efforts to improve the technical efficiency of the staff represented, and generally to improve their amenities in such a way as to conduce towards their contentment. The Government of India observe that though, so far as is known, the present membership of your Association is confined to employees of the Indian ordnance factories, the Rules of Association would allow of other persons of similar status, belonging to other departments or private firms, also becoming members. It must be understood that the recognition now promised to your association is governed by condition (a) above. While there is no objection to your association comprising persons other than ordnance factory employees, you will understand that the Government of India can consider its representations only when they are limited to the interests of a specific class as already defined.

(Copy forwarded to the Department of Commerce and Industry for information.)

APPENDIX VIII.

RULES.

PART A.—*Rules applicable to Government Employees in Departments other than the Police and Prisons Departments.*

1. Government is prepared to accord official recognition to associations of its employees which comply with the conditions set out in the following rules. Representations from such associations, whether made orally, by deputation, or presented in writing, may be received by Government officers, subject to the conditions set out in these rules, and notwithstanding anything contained in the rule relating to the submission of petitions and memorials by Government servants.

Note.—Nothing in these rules affects the discretion of the Governor-General and the Governor or other Head of a Province to receive or not to receive a deputation from any association.

2. The association must ordinarily consist of a distinct class of Government employees.

3. Every Government employee of the same class must be eligible for membership of the association.

4. Ordinarily Government will not object to persons who are not in the active service of Government being office-holders of the association, but Government reserves the right in particular cases of refusing recognition to associations of which all the office-holders are not either in the active service of Government or honourably retired officers belonging to the same class of Government employees as the association represents.

5. No representation or deputation will be received, except in connection with a matter which is, or raises questions which are, of common interest to the class represented by the association.

6. Government may require regular submission, for its information, of copies of the rules of the association and the annual statement of its accounts and of lists of its members. In the event of legislation being passed which will permit of the registration of the association, the association shall be duly registered.

7. Government may specify the channel through which representations from the association shall be submitted and the authority by whom deputations may be received.

8. The officer who is empowered to grant leave to a Government employee will, so far as is possible, grant casual leave to an employee who is a representative of a recognized association to attend duly constituted meetings of the association. The grant of such leave will be subject to the exigencies of the service, of which the officer in question shall be the sole judge, and such officer will have complete discretion to refuse such leave if asked for more than once in any month.

9. (1) In these rules unless the context otherwise requires "Government" includes a local Government and a Department of the Government of India.

(2) A local Government or a Department of the Government of India may delegate any of its powers under rules 1 to 8 to any authority subordinate to it.

(3) A local Government or a Department of the Government of India may make subsidiary rules relating to the recognition of associations of classes of Government employees subordinate to it.

COL. J. D. GRAHAM, C.I.E., I.M.S., PUBLIC HEALTH COMMISSIONER
WITH THE GOVERNMENT OF INDIA.

1. Prior to the introduction of the Reforms in 1921 industrial hygiene as a Division of the Health Organization was not regarded in India, and, indeed, in many other countries, as being of very material significance. Though, even at that time, signs were not wanting that the public and professional consciences in various countries had already demanded or were moving towards a demand for such an organization, the real awakening was just beginning, and throughout the British Empire outside of Great Britain, the movement is consequently hardly more than a decade old. It is little wonder, therefore, that India had at that period made practically no organized effort to collect any data, and to co-ordinate and control this work.

2. The peculiar circumstances surrounding the organization of the medical services in India—circumstances which have been detailed in full in a volume* prepared for the League of Nations Interchange of Health Officers two years ago—were not calculated to produce in the post-reform period such a modern development as a Division of Industrial Hygiene. Such an omission, though it is partly, no doubt, the fault of the organization referred to, indicates a very definite gap in the central health organization as at present constituted.

3. In the pre-reform period a few of the provinces took limited cognisance of this subject in their annual health reports, but the information was always scrappy; in the post-reform period, so far from becoming augmented, this has tended to become even more scrappy. In verification of this one need only turn to the annual report of the Public Health Commissioner to see how meagre is this information in regard to

* Health Organization in British India, by Colonel J. D. Graham, C.I.E., I.M.S.

industrial hygiene for an empire like that of India. It has now been arranged, however, to give greater provincial latitude to health directors in the arrangement of these health reports, and to break away from the stereotyped sectional headings of the past which have held the field for over two decades. In such instances industrial hygiene is being and will be given its proper place in these new schemes.

4. In pre-war days most civil surgeons throughout India were, where circumstances indicated, medical inspectors under the Factories Act; but I understand that this role has now ceased for many of them. Here and there certain directors of public health have been able to keep a finger on this pulse, even though the control was no longer vested in them, and have remained in visiting charge of some plants such as certain mining operations in Madras, the Burma Corporation works at Namtu, certain mines in Bombay, etc. In Bombay the officers of the Public Health Department still inspect factories, and in Madras and in the United Provinces directors of public health, certain civil surgeons and district and municipal health officers are "ex-officio" additional inspectors of factories within the limits of their jurisdictions. It is obvious that little information which was precise and in line with modern developments was likely to be available from such inspections, and a reference to the provincial reports bears this out. As a result there could be no systematic attempt to collect relevant data centrally, and such therefore do not exist. Whether, under the developments envisaged in Dominion Status, the central medical re-organization associated with such a future will be framed to include a division of industrial hygiene it is impossible to say; but there can be no doubt from the technical point of view of the necessity for its creation and organization.

5. In view of the closeness of the parallels to that of India, it will be profitable to examine briefly some other systems now in operation.

6. Great Britain has been a pioneer in this field and began early; but, if we glance hastily at this organization in other countries and in other parts of the British Empire, we see how recent is its growth.

7. In Canada it dates from 1919, and was a definite result of the British (War-time) Health of Munitions Workers Committee, which produced a realization of the main principles, of the fact that output and health are integrally related, and that health reacts delicately to all factors in the working environment. As a result of the Federal Committee on Industrial Fatigue in 1919, the assembly of a library and relevant data was made possible; and publicity and propaganda work were begun. In 1920 the former were in due course transferred to the newly created Division of Industrial Hygiene, which has functioned at Toronto for the last seven years. In 1928 a division was inaugurated for Quebec at the University of McGill. Both of these have concerned themselves with the formation of a library and information bureaux, with publicity, with propaganda, with full time medical services, and with the study of various occupational diseases both experimentally and in the field. As a result, though there is much still requiring to be done, a large number of important industries have now been investigated and are under hygienic control. Though legislation to date is scanty and there are no factory medical inspectors, the Factories Act has been administered through the Factory Inspecting Department.

8. In Australia this movement began with an enquiry into lead poisoning in Broken Hill Mines in 1893; but, at the time of Federation in 1901, there was no factory branch of any health department of State. Between 1901 and 1914 two royal commissions and various enquiries took place; but it was largely as the result, in 1917-18, of the stimulus from the Rockefeller Foundation's investigations into "hookworm" in New Guinea and Queensland that American experts were deputed to help for two years and that, in 1921, a division of industrial hygiene was established. This division, since its inception, has been exceptionally active at its three conferences of 1922, 1924 and 1927 by breaking new ground on each occasion, and by getting down to notification of occupational diseases, factory inspection, hygienic standards, morbidity statistics, child and female labour, accidents, the various poisonings, clothing trade and printing industries, flour mills, examination of Government employees, etc. The Royal Commission on Health in 1926 led to a Federal Health Council being established, and this is now functioning to the benefit of all such industrial questions. The Division of Industrial Hygiene now deals with statistics, the publications of special reports, industrial welfare services (medical, dental, nursing), medical examination of employees, uniformity of records, university training for medical officers in industrial health, and special surveys in order to set up Australian standards. In spite of all this progress and gradual improvement "State" inertia exists, and the position is still considered defective and incomplete, though it is recognized that Federation has made State co-ordination possible in a way which was not previously the case. It is realized, however, that a good start has been made, and that it is only a matter of time till employers grasp its significance and value.

9. The position in South Africa first centred round mining, and the problems associated with the importation of a large native labour population. Lord Milner, in 1903, was responsible for initiating enquiries, and in 1911 a Medical Commission on Miner's Phthisis was appointed. Since 1926 the big developments have taken place, and some of these have a special interest for us in India, in view of the composition of the labour force and the importation of much of it from Portuguese East Africa. Such diseases as silicosis, tuberculosis, hookworm, pneumonia, typhoid, scurvy as well as industrial fatigue in its various aspects have all been specially investigated with a view to scientific and rational control; and the more specifically urgent problems such as tuberculosis and pneumonia have received very special attention at the hands of the South Africa Institute for Medical Research.

10. In America this work began desultorily by its introduction over 15 years ago into certain of the more enlightened labour plants, and has since spread rapidly. I mention a few facts in this connection as examples of what is going on.

(a) The Tennessee Coal and Iron Railroad Company have, since 1913, organized and operated an Industrial Health Department very much on the lines of that of the Asansole Mines Board and the Jharia Mines Board in Bengal, thus controlling some 22 villages in six sanitary areas and establishing divisions of sanitation, medical relief, dentistry, and a social science department. This has been reproduced in scores of plants in other industries.

(b) In 1924 the New York State as a result of a conference between the College of Physicians and Surgeons, the Industrial Health Division of the State Department of Labour and the Reconstruction Hospital of New York State, established an industrial hygiene clinic in New York with devices to diagnose and treat industrial diseases, and to teach doctors in regard to these. This clinic is highly organized for the purpose with X-ray, electro-photo-hydro-mechano and occupational therapy.

(c) The Public Health Institutes created at Yale and Harvard are developing departments where highly specialized experimental research on such physiological problems as ventilation and illumination, humidity, atmosphere, etc., can be easily undertaken and efficient demonstrations given to students.

(d) Over nine years ago the Association of Industrial Physicians and Surgeons was inaugurated in America and this has done valuable work by publications, propaganda and advice on the various aspects of industrial hygiene.

(e) The Federal Government has a bureau of industrial hygiene and sanitation under its Division of Scientific Research. This is a very live bureau.

11. From the above brief references to what is happening outside of India it is obvious that not only is this a branch of recent growth, but that on these analogies a similar organization should exist in the Central Health Department of an empire like that of India. It is not for a moment suggested that nothing has been done in India in this regard. Problems of industrial housing and modern sanitation have been tackled in many industrial areas which the Commission will visit, more especially in Bombay, Nagpur, Cawnpore, Tatanagar, Calcutta, etc.; while problems specially associated with the control and prevention of infectious diseases and such tropical diseases as hookworm and malaria are being intelligently grappled with in the tea and rubber areas, in the jute factories, in the coal and iron areas of Bengal and in other places.

12. India has a wealth of disease problems; some of which are peculiarly her own; but those most in the limelight, so far as labour is concerned, are connected with the three infectious diseases—plague, cholera and smallpox—with tuberculosis, malaria, hookworm, skin diseases, including leprosy, drug addiction and, in a minor way, with venereal disease, cancer and respiratory diseases generally. The variety of "study" problems comprised in the term "industrial hygiene," in so far as India is concerned, is very great. Such problems, for example, as the examination of employees, housing, welfare of women and children in factories, fatigue and rest, nutrition, pregnancy, accidents and their relief, ventilation and lighting, child labour, malingering, noise, eye and mental strain, electric accidents, temperature, humidity, air movement, dust and health education generally are only some of those that must claim attention.

13. As Public Health Commissioner with the Government of India I feel it my duty to emphasize the necessity for the creation of a central bureau or division of industrial hygiene in any developments of the central health organization of the future. In view of the transfer under the Reforms Act and the Devolution rules of certain aspects of health work to the provinces, it may be necessary, however, to ally some slight degree of suspicion which seems to be in danger of developing between Provincial and Central Governments as a result of this transfer. The creation of a Ministry of Health would no doubt help to circumvent this; but, short of this proposal, the creation of a thoroughly representative Central Health Board would probably go far

towards meeting such difficulties as I have in my mind. The resolutions of such a Board, if it were sufficiently representative, should carry weight everywhere, and would allow of co-ordination of effort and, if necessary, legislation, on an all India basis. Such a Board would help to justify, from the administrative point of view, the creation of such a central bureau, and would be a great step forward for the wage earner, the employer, the individual doctor and society generally.

CHIEF COMMISSIONER, AJMER-MERWARA.

Conditions of Industrial Labour in Ajmer-Merwara.

Extent, Distribution and Classification.—Ajmer-Merwara is a district of 2,711 square miles with a population, according to the 1921 Census, of 4,95,271. It is surrounded on all sides by various Indian States of Rajputana. There are no plantations in the district. Statistics with regard to industrial undertakings were collected at the time of the last census. Eight years have since elapsed, and changes have occurred, but the figures may be taken as approximately indicating the present position. They show that the number of industrial establishments in the district employing ten or more persons was 73, and the number of persons employed in them was 20,410, i.e., about 4 per cent. of the total population. These establishments were classified as follows:—

Industry.	Number of Establishments.	Number of persons employed.
Mines	24	736
Textiles	19	2,405
Wood	2	48
Metal	1	30
Food industries .. .	6	146
Dress	2	48
Furniture	2	24
Means of Transport ..	7	16,295
Physical forces	1	24
Luxury	8	511
Jail factories	1	143
Total	73	20,410

The classification of these establishments (excluding the Jail Factory) with reference to size and the use of mechanical power or otherwise is shown below:—

Size of establishments.	Using power.		Not using power.	
	number of establishments.	persons employed.	number of establishments.	persons employed.
10—20 persons ..	3	47	17	237
20—50	10	315	23	710
50—100	6	434	3	185
100—200	5	576	1	164
200—400	—	—	—	—
400 and over ..	4	17,599	—	—
Total	28	18,971	44	1,296

2. Strength of Labour.—The last report on the working of the Indian Factories Act in Ajmer-Merwara, compiled by the Inspector of Factories, Punjab, North-West Frontier Province, Delhi and Ajmer-Merwara—for the year 1928—shows that there

were 40 factories in the district subject to control under the Act, 35 of which worked during the year. Their classification and the average daily number of persons employed was as follows :—

Industry.	Number of factories.	Average daily number of persons employed.	Remarks.
Textiles .. Cotton (spinning, weaving and other) factories	5*	2,097	*Two are combined with cotton ginning and pressing factories.
Engineering .. Railway workshops ..	4	10,353	
Minerals and metals .. Foundries	1	17	
Paper and printing .. Printing presses ..	1	113	
Food, drink and tobacco .. Ice and aerated waters..	1	14	
Gins and presses Cotton ginning and baling	23	2,277	
Total ..	35	14,871	

Of the 14,871 operatives employed in these factories, during 1928, 13,252 were males, 1,388 females and 231 children (between 12 and 15 years of age). Eighty-five per cent. of these workers are employed throughout the year, and 15 per cent. for four to six months, only the latter being engaged on seasonal work in cotton ginning factories.

3. The principal employers of labour in this district are the Bombay, Baroda and Central India Railway Company in their carriage and wagon and locomotive workshops in Ajmer, each of which employs about 5,000 men. Next in importance come the three principal cotton spinning and weaving mills which are located at Beawar in Merwara and employ over 2,000 persons. The cotton ginning and pressing factories also provide work for over 2,000 employees. The majority of these are located in Beawar and Kekri, but there are isolated factories at different places in various parts of the district.

4. *Recruitment.*—Recruitment of labour is not a serious consideration with the factory owners who do not attach any great importance to references except in the case of supervising and mechanical staff. The method adopted by the employer is frequently that of taking a worker for a week or more on trial, during which period wages are not always paid.

Labour in textile mills is mostly recruited from the agricultural classes, and to some extent from the artisans from neighbouring villages, but technical experts are imported principally from Ahmedabad and the United Provinces.

The B. B. & C. I. Railway Workshops, Ajmer, who employ skilled labour from almost all the neighbouring provinces, recruit mostly from the sons and relatives of their employees. The higher technical staff is imported from England.

5. *Unemployment.*—There is a certain amount of unemployment amongst workers in cotton ginning factories, the reason being that the cotton industry has experienced three poor seasons in succession. In textile mills there has been little or no unemployment during the past three or four years, this is due mainly to the fact that labour troubles in Bombay and Ahmedabad have increased the work in the textile mills of Ajmer-Merwara, and these mills have not only greatly expanded during recent years, but have also been working at full pressure.

6. *Mines.*—The mining industry is not of great importance. The mines are mostly surface mica mines scattered about the district. They are not worked very regularly or systematically and obtain labour, as required, from villages in the vicinity. As regards health, efficiency and standard of living, there is no distinction between the labourers so employed and the agriculturist. They are ordinary villagers, who from time to time take employment in the "mines" instead of working in the fields.

7. *Standard of Living.*—Generally speaking the standard of living of industrial labourers in this district is not different from the ordinary standard of living of the masses of the population. They live in the towns or villages, in or near which the factories and mills in which they are employed are located, and under the same conditions of life as any other residents of these towns or villages. As they have regular

work and in most cases adequate pay they are to this extent better off, and have more money to spend than the ordinary agriculturist who ekes out a precarious existence with uncertain harvests, dependent on the vagaries of the monsoon, and with land revenue to deduct from his profits. In some respects the establishment of mills and factories has definitely raised the standard of living of certain sections of the community. But the standard is still low, and the sustenance it provides is inclined to be inadequate. The final report of the last settlement of the district, written in 1910, contains the following observations in the section relating to the "condition of the people."

"The establishment of the railway workshops at Ajmer and the development of Nayanagar (Beawar) together with the frequent famines have had a great effect upon the condition of the artisan classes and the labourers. Formerly these village servants were paid for their work by doles of grain, or sheaves of the cut crop at harvest time, according to the amounts or rates fixed and recorded in the village's 'Wajib-ul-arz.' Uncertain and short payments of these, however, have yielded before the superior attractions of employment at regular cash wages always to be had at the workshops of mills. The workshops absorb all the labour that offers itself, and pay good wages. The previous village system has, therefore, largely broken down, but on the whole to the convenience of both parties, as the villagers now pay for the piece of work done, while the artizan class is on the whole well off, or where some of them have remained still in the villages can better themselves by moving into Ajmer or Beawar. These workshops and mills and the growing demand for labour for handling goods in the towns and at railway stations, have made things easier for the unskilled village labourers also, as in the intervals between ordinary agricultural operations they can generally find employment at good wages if they wish for it."

This was written many years ago, but serves to show that the effect of the mills and factories on the economic life of the district has been beneficial. It cannot now be said that the workshops and mills absorb all the labour that offers itself. Since 1927 there has been some reduction in the numbers employed in the railway workshops in Ajmer, and for the present at any rate they are taking on few new hands, and can employ only a fraction of the available supply of labour. In the hilly sub-division of Merwara agriculture is scanty and precarious, and cannot provide a livelihood for the whole population of the rural area. In the past the army has taken the surplus, but this outlet is now closed. The 44th Merwara Infantry was disbanded after the war, and recruitment in Merwara for other regiments of the Indian Army has been discontinued since 1927. At the same time the Mers and Merats already serving in the army were mustered out and returned to their homes. Many of these men, for whom there was no room on the land or in the mills, have sought employment outside the district, *e.g.*, in the Ahmedabad mills.

8. *Housing.*—Quarters are generally provided for the permanent staff such as managers, engineers, etc. The factories employing a limited number of workmen or those carrying on business operations during a part of the year have no apparent intention to house their labour. Two of the textile mills in Beawar have, however, made provision on a restricted scale for the accommodation of their operatives at a reasonable rent. The dwelling provided by the Krishna Mills, Beawar, are mostly constructed in corrugated iron sheeting, and are lacking in ventilation and sanitation. The quarters provided by the Edward Mills, Beawar, on the other hand, are of a somewhat improved type. The quarters provided in Ajmer by the B. B. and C. I. Railway Co., are only for their European and Anglo-Indian staff of higher grades, *e.g.*, firemen, chargemen, drivers, etc. (about 700). No quarters are provided for the lower grades of workers in the railway workshops. The housing conditions of the accommodation provided by the B. B. and C. I. Railway workshops, Ajmer, are on the whole satisfactory in relation to drainage, water supply and sanitation. The bulk of the labouring classes in Ajmer and Beawar live in privately rented quarters, while those employed in the cotton ginning and pressing factories throughout the district live in the various towns and villages subject to the conditions generally prevailing in them. In Ajmer the employees in the locomotive and carriage and wagon workshops with their families form about half the total population of the town. In spite of reduction each workshop still employs over 5,000 men. They are to be found residing in all parts of the town, and its suburbs and the adjacent villages, but the largest number is concentrated in the suburbs of Jones Ganj, Ram Ganj and Nagra, in the vicinity of the workshops.

9. *Wages.*—Wages, of course, vary considerably with the nature of the work. The average pay for unskilled labour is 12 annas a day. For skilled labour the average ranges from Rs. 15 per mensem for a press compositor to Rs. 60 per mensem for a fitter. In the Beawar Mills the average wage of a whole time worker is between Rs. 22 and Rs. 30 a month. In the Kekri cotton ginning and pressing factories the average wage is somewhat lower, but still compares favourably with the average daily

wage of an agricultural labourer, which is about four annas. In the two big railway workshops in Ajmer the average daily wage of an Indian adult workman for an eight hours day is 22 annas. It has trebled since 1914, and more than doubled since 1919. Boys (from 12 to 15 years of age) earn from three to six annas a day. For Indian adult workmen the minimum wage is seven annas a day, and the maximum Rs. 2-10 annas under the ordinary rates, and Rs. 3-4 annas under the special rates, the application of which is restricted to 20 per cent. of the men drawing the ordinary rates. There are certain grades of boilermakers, fitters and erectors, and turners who earn from Re. 1 to Rs. 11 a day. These are filled by Europeans and Anglo-Indians.

10. *Conditions of Work.*—Considerable improvement has been effected in the conditions under which employees in factories work, by enforcing the provisions of the Indian Factories Act; by introducing rules in connection with ventilation and humidification in cotton spinning and weaving mills; by insisting on adequate arrangements for water supply and sanitation; and by preventing breaches of the rules prescribing proper intervals of rest, and a maximum of 60 hours work in a week.

11. *Health.*—As regards health industrial labourers suffer generally from the same disabilities and enjoy the same facilities as other classes of workers. They live in congested and unhealthy towns and insanitary villages. The majority of them live in Ajmer and Beawar, and the municipalities of these towns have under consideration extensive schemes for improving the sanitation and water supply, if funds are available. The Bombay, Baroda and Central India Railway Company contribute towards the municipal funds, and to this extent are helping to improve the conditions under which their employees live. The employees in the Beawar Mills and the railway workshops have special medical facilities provided by their employers. The former maintain for the benefit of their workmen dispensaries at which ordinary ailments can be treated, and first aid rendered in case of accident. The Bombay, Baroda and Central India Railway in Ajmer maintain a very well equipped central hospital, with 41 beds for in-patients, conveniently situated near the workshops. It has a thoroughly efficient staff, and provides excellent medical and surgical facilities, including anti-rabic treatment. There are also four branch dispensaries—one in the locomotive workshops, one in the carriage and wagon workshops and two others. Railway employees and members of their families are entitled to free treatment, if they attend at the hospital or any of the dispensaries at the fixed hours, or in their houses, if they are too ill to leave them. The following figures for 1928 indicate the extent of the work which the hospital and dispensaries are doing:—

New cases	..	..	..	..	..	..	31,004
Daily average number under treatment	..	..	..	..	..	..	628·07
In-patients:—							
Europeans and Anglo-Indians	..	..	..	..	..	173	} 682
Indians	..	..	..	..	..	509	
Major operations	..	..	..	..	..	..	26
Minor operations	..	..	..	..	..	..	3,414
X-ray examinations	..	..	..	..	..	..	203
Anti-rabic patients	..	..	..	..	..	..	128

The principal diseases are enteric, colitis, malaria, tuberculosis, pneumonia and trachoma. The standard of health of railway employees, other than those living in railway quarters, is not high. The sanitation of Ajmer being what it is, a high standard could hardly be expected. One of the principal localities occupied by railway employees is the suburb of Nagra, which is a particularly unhealthy and insanitary part of the town.

12. *General Sanitary Conditions.*—Sanitary conditions in the larger and well organized factories are on the whole satisfactory, but in smaller factories sanitation frequently leaves much to be desired, owing partly to the ignorance of the operatives and partly to lack of interest on the part of the factory management.

Latrines are provided for workers according to rules laid down in the Ajmer-Merwara factory rules: they are flushed and kept clean by persons especially appointed for the purpose. The habits of the labouring classes being generally dirty, latrines are frequently found to be in a very insanitary condition, due more to the workers themselves than to lack of provision for supervision.

13. *Efficiency.*—As regards the efficiency of labour the standard in the mills and in the ginning and pressing factories is not remarkably high. But in the railway workshops in Ajmer the standard is certainly high, and with regard to general efficiency the labour employed in these would probably compare favourably with similar classes of industrial labour in other parts of India.

14. *Education.*—In the way of providing special educational facilities very little is done by employers in Ajmer-Merwara. The B. B. & C. I. Railway maintain an anglo-vernacular school for boys for the benefit of their employees in Jones Ganj, and a vernacular Primary School for girls in the same suburb. Both are aided by municipal grants and the former also by a grant from Government. The railway spend about Rs. 3,500 on the boys' school and Rs. 600 on the girls' school. The enrolment is 98 in the former and 48 in the latter. There is also a Railway European Primary School for boys with an enrolment of 43. The railway expenditure on this school is about Rs. 3,000. Technical schools for training apprentices are also maintained by them. The educational efforts of the Beawar Mills are confined to grants to some of the local schools. Apart from the railway schools in Ajmer, employees in industrial establishments in this district are dependent on the schools maintained by Government and local bodies for educational facilities.

15. *Relations between Employers and Employed.*—The labour force in Ajmer-Merwara is mostly unorganized and illiterate. Relations between employers and employed in Ajmer-Merwara are good. As a general rule employers are not inconsiderate in their treatment of their workers, and are ready to redress genuine grievances. Attempts on the part of agitators, mostly not belonging to Ajmer-Merwara, to stir up discontent have not met with much response. Labour troubles in other industrial centres have their repercussions here, but they have hitherto not seriously disturbed the relations existing between the workers and their employers in this district. Ajmer-Merwara has been free from industrial disputes for the past ten years.

One trade union has recently been registered in Ajmer—"The B. B. & C. I. Railway Workers' Federation." It has 48 office bearers and committee members, 31 of whom are employees in the carriage and wagon workshops and 13 in the locomotive workshops. Its nominal membership is large, but it is doubtful if the majority are effective members who have paid their subscriptions and take an active interest in the affairs of the union. Two branches of railway unions, registered in Bombay and Ahmedabad respectively, have also been opened in Ajmer, but they are more or less dormant and are said to have had little success in enlisting members. The trade union movement has only just begun in Ajmer-Merwara, and it is too early yet to say how it will develop. On the whole, employees in industrial establishments here are well content with their lot. It is the ambition of nearly every boy of the classes which supply labour in Ajmer to obtain employment in the railway workshops and there is keen competition for any vacancies. There is no general dissatisfaction with rates of pay and conditions of work.

The *Workmen's Compensation Act* is working well, and employees get the full advantage of the benefits provided by it. Employers have evinced no desire to evade their obligations. 12,399 persons work in factories which come within the scope of the Act. In these 146 cases of accident, to which its provisions were applicable, were reported in 1928, and compensation, aggregating Rs. 7,762-4 annas, was paid in 141 cases to the persons injured or, in the cases of fatal injury, to their dependants.

16. *Co-operative Movement.*—Some mention should also be made of the co-operative movement, which contains great possibilities for advancing the welfare of the industrial labourer as well as the agriculturist. Fifty-two societies with a membership of about 1,000 have up to now been formed in this district among persons of the labouring class. The majority of these are in Beawar, their members being employees in the three big mills there. Their principal object is to encourage thrift, and there is ample scope for development in this direction. The industrial labourer no less than the agriculturist suffers from the evil effects of his own improvidence and the tyranny of his social customs. He spends large sums, altogether disproportionate to his income, on marriage and other ceremonies and consequently gets into the hands of the bania, and is saddled with a burden of debt. If the Co-operative movement can help him to escape from his own disastrous habits and customs, it will open up an avenue of progress at least not less promising than the avenue which trade unionism can provide by protecting him from unfavourable conditions of employment.

17. *Welfare Work.*—Except by the B. B. and C. I. Railway Workshops, Ajmer, very little is attempted for the welfare of the employees by the factories or other agencies in Ajmer-Merwara. The facilities for recreation provided by the railway company in Ajmer and the amenities which the railway institute offers (i.e., libraries, reading rooms, band and cinema shows) are provided for their European and Anglo-Indian employees only. It is, however, understood that the railway have given monetary assistance to a few recreation clubs started by their Indian employees. For the latter there is also an Indian Co-operative Association, at which they are able to purchase supplies at reasonable rates, and which thus exercises a moderating effect on prices generally, as its competition prevents profiteers from unduly forcing up prices of foodstuffs. Special sheds have also been erected for the operatives to take their meals in at meal times.

Mr. W. H. ABEL, INSPECTOR OF FACTORIES.

Labour in Factories in Ajmer-Merwara.

As shown in the latest report the total number of persons employed in all factories in Ajmer-Merwara is 14,871, of which 13,252 are men, 1,388 women and 231 children (between 12 and 15 years of age). Eighty-five per cent. of these workers are employed throughout the year, and 15 per cent. for four to six months only—the latter being engaged on seasonal work in cotton ginning factories.

Of the total number, 2,097 are employed in textile mills, 10,353 in railway workshops, 2,277 in cotton ginning factories and 144 in other factories.

Of the total number of women and children, 1,185 women and 103 children are employed in cotton ginning factories, while 203 women and 85 children are employed in textile mills.

I.—Recruitment.

3. (i) Recruitment in factories is usually carried out by a labour contractor.

Recruitment is also made by personal acquaintance, most of the permanent workers such as engineers, mechanics and other skilled workers appear to have friends or relations looking for an improvement on their job, and references regarding ability and certificates not being of great value, changes of service frequently occur. Unskilled and casual labour is recruited through the labour contractor, and mostly paid by him at the end of the day. There is, however, no guarantee given by the contractor that work will be forthcoming the following day, as it all depends on the amount of work that will be available.

(ii) Labour force generally being illiterate would look with suspicion on any change that might be contemplated in the present system.

III.—Housing.

16.—(i) Quarters are generally provided for the permanent staff such as managers, clerks, engineers, etc. The factories employing a limited number of workmen or those carrying on business operations during a part of the year have evidently no intention to house their labour. Two of the textile mills in Beawar and the Bombay-Baroda and Central India Railway Workshops, Ajmer, have, however, made a provision on a restricted scale for the accommodation of their operatives at a reasonable rent. The dwellings provided by Krishna Mills, Beawar, are mostly constructed in corrugated iron sheeting and lack in ventilation and sanitation. The quarters of the Edward Mills, Beawar, on the other hand, are of a somewhat improved type. The housing conditions of the Bombay-Baroda and Central India Railway Workshops, Ajmer, in so far as the accommodation is provided, are on the whole satisfactory in relation to drainage, water supply and sanitation.

(ii) There are no Government factories in the province.

(iii) The bulk of the labouring classes in Beawar and Ajmer employed in the cotton ginning and pressing factories live in quarters provided by the private landlords.

IV.—Health.

23. Health of workers in all factories appears to be generally good, but in the absence of statistics it is not possible to say what percentage stay away from work owing to sickness. Factory records merely show absentees, a big proportion of which are on holiday. Well organized factories such as textile mills and railway workshops are well ventilated and healthy to work in, as also most of the cotton ginning factories, which are situated in large open spaces; in smaller factories especially those situated in congested city areas, there is still room for improvement.

24. (i) Medical facilities for the workers and their families are provided in the case of bigger mills and factories.

(ii) Government dispensaries treat the workers and their families free of charge, and most of the factory workers depend upon Government dispensaries.

26. (a) (i) Latrines are provided for workpeople in factories according to rules laid down in the Ajmer-Merwara Factory Rules, except in such circumstances where the factories are open to the country on three sides. Although latrines are provided, it is only in big mills and towns where they are made use of.

(ii) The water supply throughout the province is satisfactory. Good rains throughout the province during the year 1928 provided a plentiful supply of water for drinking. Drinking water is supplied to the operatives free of charge.

(iii) *Bathing and Washing.*—No special arrangements have been made by the factories in this behalf.

28. (ii) Special rules for the control of temperature and humidity in the cotton spinning and weaving mills came into force only last year. There are only five cotton spinning and weaving mills in which artificial humidity is being used at present, affecting about 2,097 operatives. The rules are still in an experimental stage, and it is yet too early to report with regard to their suitability or otherwise.

29. (i) Up to this time no occupational disease has been reported or has come to my notice.

VII.—Safety.

43. *Railways*.—Regulations with regard to the workers' safety are shown in rules made under the Indian Factories Act, and are based on the workshop rules existing in Europe, altered where necessary to meet local conditions. An abstract of the principal rules relating to general safety is posted up at the entrance of all factories in English and in the language of the majority of workers. Apart from this, every year a circular letter is issued to all factories bringing to their notice the chief requirements relating to safety measures, and to other requirements of the factory law relating to hours of work, etc. In this circular a special reference is made with regard to the guarding of the dangerous machines, and any other matter of importance which requires careful attention, when these regulations are persistently violated prosecutions are instituted against the offenders.

44.—A reference to annual reports on the working of the Indian Factories Act in Ajmer-Merwara, will show that accidents have increased considerably during the past five years.

45. The increase in the number of accidents referred to in the preceding paragraph is attributable to the following causes :—

(a) More accurate reporting of accidents by factory owners, due to some extent to the strict administration of factory law.

(b) Operatives are themselves becoming acquainted with the fact that accidents should be reported and they frequently report themselves to the factory inspector's office.

(c) The introduction of the Workmen's Compensation Act has also had an effect on accident reporting as the injured persons think that by reporting accidents they might get compensation.

(d) Ignorance of the workers and a belief in fate rather than carefulness is also responsible for many accidents. After frequent demonstrations of how to handle a particular machine, workers with apparently full knowledge of the dangers, still take frightful and unnecessary risks.

(e) Frequent instances of serious accidents are reported where workers remove safety guards in order to clear a jam or fault, and use their hands or feet to put the fault right. This is to a great extent due to ignorance, but much also is due to carelessness and disregard of known dangers.

(f) Investigations into the causes of serious and fatal accidents to workers on dangerous duties, such as maintaining of pulleys in order, oiling of bearings, etc., show that underpaid and unskilled workers are put on jobs of which they have no experience; there is no definitely laid down standard of a skilled worker, and it is therefore impossible to bring home to the employer his responsibility in this respect.

49. (i) During the year 1928, 77 inspections were made, resulting in one prosecution to enforce factory regulations.

The bigger and well-organized mills do consider it their duty to work to factory rules, and make an effort to do so.

IX.—Hours.

A.—Factories.

55. Factory law permits working 11 hours a day, but not exceeding 60 hours a week. In perennial factories other than railway workshops is taken full advantage of.

56. Factories work for six days a week, and the seventh day, which is a Sunday, or a substituted day, is observed as a complete holiday.

57. So far as workers are concerned, they have welcomed the 60-hours week since the change has not been accompanied by the reduction in wages.

59. A further reduction in the maximum hours per week is, I think, not advisable, especially in the case of seasonal factories in which punctuality and consistent work are not noticeable amongst factory workers, few factories have yet adopted the

clocking in and out system, as a result considerable amount of time is wasted in getting to and from the actual job: it is improbable that in a 10-hours' day the average worker is on his job more than 8½ hours.

60. (i) *Existing Practice.*—(a) The break after putting in six hours' work is very useful and does go a long way in preventing undue fatigue.

(b) The break after six hours' work is utilized chiefly as a rest. The workers do not generally take their meals at this time, their meal hour being earlier in the morning, between 9 and 10, and again after their work in the evening.

(ii) The existing law seems to have worked satisfactorily in this direction.

(iv) Ample holidays are given or taken by the workers, apart from the weekly holidays there are many public holidays which are given to workers either as extra holidays or substituted for weekly holidays.

61. (i) The day of rest is usually Sunday. It is, however, possible to change the weekly rest day at any time by giving previous notice to the inspector, and this is done whenever the necessity arises—public holidays are often substituted for Sundays.

(ii) The existing law seems to have worked satisfactorily in this direction.

C.—Railways.

73. Railway workshops at Ajmer have a uniform eight hours a day or 48 hours a week.

74. Railway workshops work for six days a week, and the seventh day, which is a Sunday, is observed as a complete holiday.

76. Rest intervals and weekly holidays are observed like other factories.

X.—Special Questions relating to Women, young Adults and Children.

A.—Factories.

82. The admission of children into factories is discouraged. It is, however, difficult to always keep them out, because they are too young to be separated from their mothers.

83. The present regulations with regard to the employment of women in factories are quite suitable. Hours of employment for women are the same as for men, except that the former cannot be employed before 5.30 a.m. or after 7 p.m.

84. The present law with regard to the employment of children appears to have worked satisfactorily.

XII.—Wages.

96. (i) The prevailing rates of wages for the past five years are given below:—

Classification of Labour.	Average per Month.				
	1924.	1925.	1926.	1927.	1928.
1. Skilled Labour.					
Fitter	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Blacksmith	58 0 0	58 0 0	60 0 0	60 0 0	60 0 0
Carpenter	35 0 0	35 0 0	35 0 0	35 0 0	34 0 0
Engine driver	30 0 0	30 0 0	30 0 0	30 0 0	30 0 0
Boilerman	30 0 0	30 0 0	28 0 0	28 0 0	28 0 0
Oilman	18 0 0	18 0 0	18 0 0	18 0 0	20 0 0
Mochi	30 0 0	30 0 0	30 0 0	30 0 0	30 0 0
Weaver	33 0 0	33 0 0	33 0 0	33 0 0	34 0 0
Spinner	30 0 0	30 0 0	32 0 0	32 0 0	32 0 0
Dyer	15 0 0	15 0 0	16 0 0	16 0 0	16 0 0
Reeler (woman)	25 0 0	25 0 0	25 0 0	25 0 0	25 0 0
Press compositor	15 0 0	15 0 0	15 0 0	15 0 0	16 0 0
2. Unskilled Labour.					
Coolie	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Coolie (woman) on gins	0 11 0	0 11 0	0 11 0	0 12 0	0 11 0
	0 5 0	0 5 0	0 5 0	0 5 6	0 5 6

XIII.—Industrial Efficiency of Workers.

112. The efficiency of the highly paid workers has increased slightly during the past five years, but in the case of labouring classes no improvement has been noticed. In fact the efficiency of these workers has not kept pace with the advent of modern machinery in factories. In my opinion health is one of the chief factors governing the efficiency of the workers, and unless the labouring classes are well fed by an increase in their wages, it is not possible to effect any improvement in this behalf.

113. I am of opinion that the foreign worker has proved to be more efficient than an Indian worker.

XVII.—Administration.

138. The average workman has little knowledge of factory legislation ; although copies of the abstracts of the Indian Factories Act and the rules made thereunder both in English and in the language of the majority of workers are posted up in every factory, yet it is doubtful if the worker ever makes an effort to get to know what the posters really mean.

139. (i) In this province which is one of the four provinces under my jurisdiction, namely, Punjab, Delhi, North-West Frontier Province and Ajmer-Merwara, the Factory Inspection staff consists of one full-time Inspector, one Industrial Surveyor under the control of Director of Industries, Punjab, stationed at Delhi, who is notified as additional Inspector of Factories under certain sections of the Indian Factories Act for Ajmer-Merwara.

The number of factories in this province at present is 40 and the staff is adequate.

It may be noted here that the local Government in the case of Punjab have decided to appoint one full-time Inspector with effect from 1st April, 1930, withdrawing the powers conferred upon the five Industrial Surveyors in the Punjab. Thus from April next there will be one Chief Inspector and one Inspector in the Punjab.

Should the Ajmer-Merwara Government follow the Punjab's lead in this respect, inspection of factories in Ajmer-Merwara will be much more efficient, as the big textile mills require considerably more attention from a fully qualified Inspector than can be given at present. The newly appointed Inspector for the Punjab will be an experienced technical officer, whereas the Additional Factory Inspector, Delhi, is notified for certain sections of the Act only.

(ii) Rigour and efficiency of administration of factory law depends on frequent inspections, instructions, prosecutions and finally on their results.

(iii) During the year 1928 only one case under the factory law was instituted against the occupier of a factory, and the same resulted in the conviction of the occupier.

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Miss J. E. COPELAND, M.A., CHURCH OF SCOTLAND MISSION HOUSE,
AJMER.

I.—Recruitment.

1. There is practically no migration. The chief industrial centres are Ajmer, Beawar, Kekri. Most of the labourers particularly the women labourers, are residents of these centres, or they come in from neighbouring villages.

2. Some labourers live in their villages and walk to and from work daily. Others move into town, but go out to their villages on holidays.

3. There should be some organized system of recruiting labour. The need is specially urgent in the matter of getting boys into suitable employment when they leave school, and in the matter of securing a better system of apprenticeship and training, either within the area or beyond.

7. There is considerable unemployment. The B. B. & C. I. Railway, which is the largest employer of labour in the area, is reducing its staff of workmen.

III.—Housing.

The B. B. & C. I. Railway have quarters for their employees, but not in sufficient numbers. There is indeed great shortage of houses for working people in Ajmer. In Beawar the Edward Mills and the Krishna Mills have some workmen's houses, but no adequate provision.

IV.—Health.

23. Registration of births and deaths is not effectively carried out, so reliable statistics are not available. Working conditions are on the whole satisfactory in the bigger concerns. Where there are home industries as "tying and dyeing" and "gota weaving" in Ajmer, the conditions are not good, because of the low rates of pay, the bad sanitary arrangements of the city, and the small size and bad ventilation of most of the workers' houses.

It is, however, a welcome sign of progress that local Vaidhy has just published a book on the "Increased Mortality in Beawar, its Causes and Cure."

24. In Ajmer, the B.B. & C.I. Railway have good medical arrangements, a hospital, dispensaries, child welfare centre. There are also good Government and mission hospitals, numerous private dispensaries, a maternity home, child welfare centres and a supply of trained midwives.

In Beawar there is a Government hospital, with male and female departments. Private Vaidhys (five) also practise in the city. But these facilities are far from the mill area. There is urgent need for more medical provision in Beawar, and this should be near the mills. Two of the mills engage the services of Vaidhys, but these are not always at the works. The third large mill keeps first aid appliances in the mill. There should be a Government dispensary in the mill area contributed to by the millowners. There should also be a trained midwife whose special duty it would be to look after maternity cases among the wives of the millhands and among the women labourers. This midwife should be supported by the three large mills, and her services should be made available free to the labourers. It would also be very desirable to have a trained health or welfare worker who would look after the women's interests in other than maternity cases.

25. Such facilities as exist are made use of.

26. Sanitary arrangements in the larger factories are fairly satisfactory. The B.B. & C.I. Railway employ no women and the silk factory only a few. Drinking water arrangements are good in the city, but sanitary arrangements are bad. In Beawar, where most of the women labourers of this district are employed, separate latrine and bathing arrangements should be provided in another part of the compound from the men's.

In one of the mills the drinking water is too far away from the work buildings.

28. The question of humidification in the Beawar Cotton Mills is engaging the attention of the inspecting officers.

V.—Welfare.

32. In Ajmer, the B.B. & C.I. Railway provide two schools for workers' children, one European school and one Indian. The railway also organizes an annual sports day and a Christmas tree for the children. Apart from this no definite welfare work is being done among the railway Indian employees or in the mills and ginning factories of Beawar and Kekri. Some years ago, a beginning was made in the Beawar Mills with a monthly visit to each of the three large concerns of a lady social worker, who held a meeting for the women labourers. This attempt at welfare work should be resumed, and progress made along these lines: In Ajmer, sports, recreation and amusements are catered for by many agencies. The various churches and missions, also, have many strong effective and helpful contacts with the railway employees, but more could be done if the employers helped directly by organization providing opportunities, lending halls, etc. The W.C. Temperance Union and other temperance societies, by occasional meetings, public or other lantern lectures, and other propaganda are also helping to raise the standard of life and efficiency among the labourers, but here more also could be done if the employers co-operated directly. In two of the Beawar Mills there are shelters set aside for the infants of women labourers, but except the building, no other arrangements are made by the millowners. These shelters should be utilized for creches with a competent woman in charge. Each of the three larger mills should have such a creche, with full time though not necessarily highly paid workers, and one trained health or welfare worker should organize and supervise all three and look after the wider interests of the women labourers.

36. In Ajmer, the B.B. & C.I. Railway provides for the education of workers' children in two schools, one for European, the other for Indian children. In Beawar, the mills contribute to schools in the city, but these schools are not attended by workers' children, who are almost entirely illiterate. In Kekri, no provision for education is made by the ginning factories, and the workers and their children are almost entirely illiterate.

VI.—Education.

40. In Ajmer, there are Government (higher education only) municipal, mission and other private schools. These are for children not in employment. There are some privately-run night schools for boys or young adults at work during the day.

41. Facilities for industrial and vocational training are quite inadequate. The principal method in use is to put a new worker alongside an experienced man or woman. The method as practised seems to have many defects.

VII.—Safety.

46. In all the Beawar mills safety propaganda consists only in the expectation that old workers should warn employees as they work beside them.

48. First aid appliances are kept, and two of the Beawar mills employ Vaidhys who, however, are not usually or always at the works.

50. Women are not employed in any of the more dangerous operations in the Beawar cotton mills or Kekri ginning factories.

IX.—Hours.

55. Women workers in Kekri and Beawar work 10 hours per day, 60 hours per week.

56. Sunday is the usual off-day, except in Jain factories, where the 8th and 14th are observed as holidays. When a festival falls upon a working day in any week the workers must work on Sunday to make up for the holiday on account of the festival.

60. In the mills, workers seem to take their meals at any time, and there seemed a lack of concentrated effort. The working hours should be reduced to nine or eight per day.

X.—Special Questions relating to Women, young Adults and Children.

82. Infants play around in the factory and mill compounds, but are forbidden to go near dangerous places. More thorough arrangements are necessary and creches should be established in the Beawar mills, and perhaps also in Kekri during the busy cold weather season.

84. There are few children employed in the larger concerns.

86. Facilities for apprenticeship are totally inadequate even in the large B.B. & C.I. Railway workshops, and in other industries are non-existent in the true sense of the word "apprentice."

LIEUTENANT-COLONEL G. M. MILLAR, O.B.E., I.M.S., CHIEF MEDICAL OFFICER IN RAJPUTANA AND CIVIL SURGEON, AJMER-MERWARA.

23. *General Health Conditions of Workers.*—No separate returns of mortality, birth rate and infant mortality are maintained for workers in Ajmer-Merwara, but judging from the general appearance of the workers I consider that the general standard of health is good.

Working conditions on the whole are satisfactory. Out of a total of approximately 15,000 workers, about 12,000 are employed by four concerns, the B.B. & C.I. Railway workshops at Ajmer, the Edward Mills Co., the Krishna Mills Co., and the Maha Lakshmi Mills Co., the last three cotton mills at Beawar. The conditions at the railway workshops are excellent, and those at the three mills mentioned are very good.

The dietary of Europeans and Anglo-Indians calls for no comment, while that of Indian workers is the same as that used by the ordinary inhabitants of Ajmer-Merwara, the principal constituent of which is barley, to which is added a little maize and gram and occasionally wheat.

The physique of Indian workers is in general well up to the standard of this district, and does not seem to me to be adversely affected by working conditions.

No statistics are available to show whether there is any disturbance of the sex ratio, or to indicate the relation between housing and mortality.

24. *Extent of Medical facilities provided.*—The B.B. & C.I. railway maintain a large up-to-date hospital in Ajmer for their employees and families as well as four out-door dispensaries.

With this exception no hospitals or dispensaries are maintained by employers.

Factories exist at Ajmer, Beawar and Kekri, at which places Government controlled medical institutions are situated, to which workers have free access.

In Ajmer there is a mission hospital for women controlled by the Scotch Mission. In Beawar a lady sub-assistant surgeon is on the staff of the dispensary.

A maternity home at Ajmer, in which dais are trained, is maintained under the Lady Chelmsford League.

25. *Extent to which medical facilities are utilized.*—In general these facilities are utilized freely, and women on the whole now come freely to medical institutions.

26. *Sanitary Arrangements.*—Latrines in general in work places are sufficient and well kept, and the supply of water for drinking, bathing and washing is good and sufficient.

27. *Extent and Nature of Official Supervision.*—The Civil Surgeon is a Joint Inspector of Factories for the purpose of supervizing the sanitation of factories and the inspection of children employed in them.

There are four certifying surgeons, two at Ajmer, one at Beawar and one at Kekri, who examine and issue certificates to all children employed in factories.

In the railway workshops at Ajmer no person is allowed to work till he has been declared fit by one of the railway medical officers.

A large area in Ajmer is controlled by the B.B. & C.I. Railway, the health supervision of which is efficiently controlled by the railway medical officers and their sanitary staff.

There are no special plantations in Ajmer-Merwara.

28. *Suitability of existing Factories and Mines Acts and Rules.*—I consider the existing Acts and rules satisfactory and suitable for this area. The temperature in factories is not excessive considering the normal atmospheric temperatures which are prevalent.

Owing to the general dryness of the atmosphere throughout the greater part of the year humidifiers have to be employed in cotton mills. Those in use at present seem satisfactory, while the introduction of live steam to any room where the temperature exceeds 85° F. has been prohibited. The conditions at present prevailing do not seem to be injurious to the health of the workers.

29. *Disease.*—Industrial diseases have not occurred recently. In the past a few cases of lead-poisoning occurred in the railway workshops at Ajmer.

Cholera occurs, but epidemics are practically never severe. Malaria is endemic, but usually is not severe; hookworm and leprosy are not common. Dysentery is prevalent. No other tropical disease is sufficiently prevalent to call for comment.

In Ajmer city tuberculosis is very prevalent.

30 and 31. There is no provision for sickness insurance or maternity benefits.

43. *First Aid and Medical Relief.*—In the railway workshops at Ajmer the arrangements are very well organized and highly efficient. At Beawar a few drugs and dressings are available in the larger mills. It would, I think, be possible to arrange for instruction in first-aid to some of the workers in these mills.

84. *Suitability of Regulations affecting Children.*—These appear to me satisfactory. The great majority of children employed in the factories are strong and healthy. The minimum age of twelve and the maximum age of fifteen are suitable for this area.

Mr. E. C. GIBSON, I.C.S., COMMISSIONER FOR WORKMEN'S COMPENSATION, AJMER-MERWARA.

VIII.

Workmen's Compensation.

51. During the four years subsequent to the year in which the Workmen's Compensation Act was brought into force (1924), the number of accidents reported from factories and coming within the purview of the Act, the number of cases in which compensation was paid, and the amount paid was as shown below. The figures are

taken from the Annual Report on the working of the Workmen's Compensation Act, which is compiled by the Inspector of Factories, Punjab, North-West Frontier Province, Delhi and Ajmer-Merwara :—

Year.	Number of accidents coming within the purview of the Workmen's Compensation Act.	Number of cases in which compensation was paid.	Total amount of compensation paid.
1925	284	281	Rs. a. p. 3,009 9 6
1926	459	458	3,924 1 0
1927	134	134	3,385 0 0
1928	146	141	7,762 4 0

Very few cases come before the Commissioner under the Workmen's Compensation Act. The number of such cases, which have been dealt with since the Act came into force, is 27 up to and including 1928. Of these cases 22 were merely for the registration of agreements; four related to claims for compensation contested by employers, and one to distribution of compensation to dependents of a workman fatally injured. Most of these cases came from the three big mills in Beawar. Naturally, the largest number of accidents occur in the railway workshops, but until recently cases of compensation to employees of these workshops have been dealt with by the District Magistrate, Abu, and not by the Commissioner, Ajmer.

(iii) *Effects on Industry.*—In the Statement of Objects and Reasons drawn up when the Bill was introduced in the Legislative Assembly in 1922, some of the advantages that might be expected to result from this legislation were described as follows :—

“ An additional advantage of legislation of this type is that by increasing the importance for the employer of adequate safety devices, it reduces the number of accidents to workmen in a manner that cannot be achieved by official inspection. Further, the encouragement given to employers to provide adequate medical treatment for their workmen should mitigate the effects of such accidents as do occur. The benefits so conferred on the workman added to the increased sense of security which he will enjoy, should render industrial life more attractive, and thus increase the available supply of labour. At the same time a corresponding increase in the efficiency of the average workman may be expected.”

The Act has only been in force for five years, but the beneficial results anticipated are in process of achievement. It is probable that some workers, who fall below the higher standard of physical fitness which is now demanded by some employers, find it more difficult to obtain employment in the larger industrial establishments such as the railway workshops where, I believe, stricter medical examination before employment is now insisted on. On the other hand a system, under which only persons who are physically fit can obtain employment, must tend to increase the efficiency of labour in industrial undertakings.

So far as this district is concerned, the available supply of industrial labour is at present greater than the demand. In Ajmer this is partly due to the fact that the railway workshops are reducing the number of their employees. In Merwara I believe that a certain number of men have recently gone to Ahmedabad to seek employments in the mills there, because they are not able to get employment in the Beawar mills. This is partly due to the fact that as recruitment for the army in Merwara has recently been discontinued, military service, which formerly attracted considerable numbers of the rural population of this sub-division, is no longer open to them.

(iv) Insurance companies provide facilities for covering employers' liabilities under the Act and some, at any rate, of the mill and factory owners in this district do cover their liability by insurance. The value of this is presumably greater from the point of view of the employer than of the worker, though the latter must also benefit indirectly, since his chances of recovering compensation due to him under the Act are not prejudiced by the reluctance or inability of his employer to pay it, and any temptation to withhold compensation is removed when liability is transferred from an employer to an insurance company. No case, however, in which an employer has tried to evade or been unable to meet his obligations under the Act has come to my notice in Ajmer-Merwara.

(9) The scope of the Act is at present confined to industries which are more or less organized, and the classes of workmen benefited by the Act are, generally speaking those whose occupations are hazardous. Some system of compulsory insurance would probably be necessary if the provisions of the Act were extended to workers in unorganized industries. The difficulties and expense of administering such a scheme would, however, be very great.

52. Logically there seems to be no strong argument against the extension of the Act to unorganized industries and non-hazardous employments. It is very doubtful, however, if such extension of the Act could be made practically effective without a system of compulsory insurance, and whether the difficulties of enforcing any such system of compulsory insurance could be satisfactorily overcome.

53. I have not heard of any dissatisfaction on the part either of employers or workmen in this district with the provisions of the Act. No doubt they are capable of improvement in some respects. I think that they are perhaps most open to criticism as regards the *scales of compensation* payable to workmen on lower pay. Compensation for injuries received by such workmen are often, in my opinion, somewhat unequal and inadequate. I may quote as an instance the last case with which I have dealt. This was the case of a workman who, as the result of an accident while employed on his regular work, received injuries which necessitated the amputation of the four fingers on his right hand. His pay being Rs. 12 a month, the compensation to which he was entitled under the Act was Rs. 126. This amount seems to be hardly commensurate with the extent of the disablement. With only the thumb left he has practically lost the use of his right hand. Similarly, if a workman drawing Rs. 10 a month loses any finger other than the index finger he is, in accordance with the provisions of Section 4 (1) (c) (i) read with Schedule I of the Act, entitled to receive compensation amounting to Rs. 21.

The *waiting period* of 10 days provided for in Section 4 (1) (d) of the Act also, no doubt, causes a certain amount of hardship to workmen by reducing the amount of compensation payable to them. It is probably, however, undesirable to reduce the period, and I believe that the method of "dating back" for purposes of compensation has serious disadvantages. I understand that the Bombay, Baroda and Central India Railway pay their employees full pay for the first 10 days (or shorter period) of disablement. If this example were followed by other employers of labour, the hardship would be removed.

Owing to the habitual improvidence of the Indian labouring classes the system of paying compensation in a lump sum is not very satisfactory. In principle a system of *recurring payments* would certainly be preferable, but here, too, the practical difficulties would be great, one of the principal obstacles being the fact that much of the labour employed in factories is migratory.

As far as this district is concerned I think that the present machinery for administering the Act works on the whole satisfactorily.

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