

REPORT ON INDUSTRIAL HYGIENE CONFERENCE.

The Prime Minister of the Commonwealth on the 17th June, 1922, issued invitations to the Premiers of the several States as follows:—

"I desire to inform you that as a result of the inquiries made by the Commonwealth Department of Health in the field of Industrial Hygiene, it has become evident that much good will result from a conference between State representatives concerning certain important phases in the relationship between industrial conditions and health.

"In connection with such important matters as child labour, female labour, and notification of occupational diseases, there is considerable diversity in standards and practice at present, and it appears likely that much good can be accomplished by a conference which will not improbably result ultimately in some uniformity of standards and practice throughout the States.

"It is accordingly proposed to hold such a conference in Melbourne at a date to be fixed in August, and it is considered that attention should primarily be given to the following subjects:—

Child Labour;
Female Labour;
Notification of Occupational Diseases;
Factory Inspection;
Standards;
Morbidity Statistics;

"It is suggested that from your State a delegate from the Health Department and from the Department controlling factory inspection might be sent. The Commonwealth Department of Health will be represented by three delegates.

"I should be glad if you will advise me whether your Government is prepared to send delegates to such a conference, and, if so, I should be glad to learn the names of those who will attend."

In the case of New South Wales a delegate from the Railway Medical Inspection Service was also invited.

It was found to be more convenient to hold the conference in Sydney.

The conference met in the Customs House, Sydney, at 10 a.m. on Monday, 11th September, 1922. The following delegates were present:—

Dr. J. H. L. Cumpston, M.D., D.P.H., Director-General of Health for the Commonwealth.

Dr. A. J. Lanza, M.D., International Health Board, Advisory Expert in Industrial Hygiene.

Dr. D. G. Robertson, M.D., D.P.H., Industrial Hygiene Division.

Dr. R. Dick, M.B., Ch.M. (Syd.), D.P.H. (Camb.), Senior Medical Officer of Health, representing the Director-General of Public Health, New South Wales.

Dr. G. M. Taylor, L.R.C.P., L.R.C.S. (Edin.), Railway Medical Officer, New South Wales.

Mr. W. I. Taylor, Chief Inspector of Factories and Investigation Officer, New South Wales.

Dr. E. Robertson, L.R.C.P., F.R.C.S. (Edin.), Chairman, Department of Public Health, Victoria.

Mr. H. M. Murphy, Secretary for Labour, Melbourne.

Dr. J. I. Moore, M.D., F.R.C.S., D.P.H., Commissioner of Public Health, Queensland.

Mr. F. E. Walsh, Director of Labour, Queensland.

Dr. W. Ramsay Smith, M.D., D.Sc., F.R.S. (Edin.), Chairman, Central Board of Health, South Australia.

Dr. Everitt Atkinson, M.A., M.D., D.P.H., Commissioner of Public Health, Western Australia.

Dr. E. S. Morris, M.B., Ch.M., D.P.H., Director of Public Health, Tasmania.

Mr. H. Reynolds, Chief Inspector of Factories, Tasmania.

Dr. J. H. L. Cumpston was elected to the chair.

In opening the conference, the Chairman explained that Mr. Massy Greene, Minister for Health, had proposed opening the conference, but had been unavoidably prevented from doing so.

The Chairman read the following message from Mr. Greene:—

"Would you kindly convey to the members of the Inter-State Conference on Industrial Hygiene my good wishes for a successful and profitable conference.

"The Commonwealth Government, in establishing the Division of Industrial Hygiene, has given expression to its wish that all practicable means by which avoidable-sickness or disablement can be prevented should be brought universally into operation in Australia.

"The object of convening this conference is that an endeavour shall be made to arrive at a concerted basis of action and a uniform basis for standards and records, and it is my hope, as Minister of Health for the Commonwealth, that this conference will mark the beginning of an increased interest and activity in the application of the laws of health for the benefit of those engaged in all classes of industrial work."

An agenda paper as follows was submitted for discussion:

AGENDA.

1. Child Labour.—Legislative provisions for the protection of young persons industrially engaged. Minimum age for employment. Certificates of fitness. Physical examination and re-examination of youthful workers. Certifying factory surgeons.
2. Female Labour.—Restrictions against employment of females in certain specified trade processes. Restriction against employment of females prior to and after confinement. General legislative safeguards.
3. Occupational Diseases.—Notification of occupational diseases by medical practitioners.
4. Morbidity Statistics.—Stimulation and standardisation of morbidity statistics and accident statistics.
5. Hygienic Standards.—Formulation of minimum hygienic standards.
6. Factory Hygiene and Inspection.—Educational facilities for factory inspectors. Provision of medical inspectors of factories.
7. Medical Supervision of Persons Engaged in Industry.

COMMENTS ON AGENDA.

I.—CHILD LABOUR.

The employment of adolescents presents certain special features. In youth vital energy is required not solely for health maintenance, but for the important function of growth as well. Young persons are less capable than adults of prolonged effort or sustained attention to work. The effects of subjection to long hours, to hard physical strain and to unhealthful working conditions are far more serious in adolescents than adults. Exposure to such conditions menaces health, delays development, causes physical deformities, and too frequently ends in broken health. The necessity for a close supervision of the minor in industry to guard him against injury to health and development is therefore obvious. The child of to-day is the citizen of to-morrow, and his health and development are of the utmost importance to the State.

Each State in the Commonwealth has made legislative provision with a view to safeguarding the health of the youthful worker. Restrictions have been made as regards the length of

hours that may be worked (identical with those laid down for females), the performance of night work and Sunday work (Queensland), employment in certain trade processes and in certain classes of factories without medical certificates of fitness. A brief summary of the State requirements regarding age restrictions and medical certificates of fitness is given hereunder:—

Age Restrictions.

Males.—New South Wales, Victoria, Western Australia, Queensland, and Tasmania prohibit the employment of any male under the age of fourteen years, but in Queensland and New South Wales special permission may be granted by the Minister to children of the age of thirteen years.

South Australia prohibits the employment of any child under the age of thirteen years, unless he has passed the educational standard and obtained the permission of the Chief Inspector to be so employed.

Females.—The provisions made are similar to those of the males, except that in Victoria and Western Australia the employment of females under fifteen years of age is prohibited, although in Victoria the Chief Inspector may grant permission to a girl of fourteen years of age.

Certificates of Fitness.

In all the States the provisions relate to persons under the age of sixteen years.

New South Wales.—Certificates are required before employment in certain classes of factories. Certificates must state that the medical examiner is satisfied as to the age specified on the certificate (by certificate of birth or other evidence) and that the examinee is not incapacitated by disease or bodily infirmity from working daily for the time allowed by law in the factory named in the certificate. Certificates may be granted by any legally qualified medical practitioner.

Victoria.—Certificates are required before employment in certain classes of factories, or when through special circumstances the Chief Inspector may demand; in all other cases a certificate of birth or other documentary evidence may be demanded. Certificates must afford the same information as in New South Wales, but the medical examiner may specify fitness for employment in all classes of factories or any of them. Certificates may be granted only by the district certifying medical practitioners; should none be appointed for any district, the public vaccinator is given power to act.

Queensland.—Same as New South Wales, except that when certificates are not required the occupier of the factory has to obtain a certificate of birth or a certificate from an inspector that he is satisfied as to age.

South Australia.—Same as Victoria, with the exception that no mention is made of public vaccinators. Apparently regulations have not been made specifying any classes of factories.

Western Australia.—Certificates are required when an inspector is of opinion that any boy or girl is physically unfit. Certificates must afford the same particulars as in other States. Certificates may be granted only by medical officers of health.

Tasmania.—Provisions the same as Victoria, except that the certificates may be given by any legally qualified medical practitioner.

New South Wales and Queensland have made special provision for medical examination of young persons who (despite the possession of a certificate of fitness) are in the opinion of an inspector incapacitated, through illness or bodily infirmity, from working daily for the time allowed by law. These persons are compelled to produce a certificate from any legally qualified medical practitioner to the effect that they are in a fit physical condition before they can resume work.

The "Commonwealth Year-Book," No. 14, shows that in 1919-1920 the number of persons under the age of sixteen years employed in factories was 18,938. It is stated that there has been a general increase in the number of children so employed during the past quinquennial period. The percentage of chil-

dren (under sixteen years of age) on total persons employed in factories was 4.72 in 1915 and 5.03 in 1920.

The annual reports of the State Labour Departments dealing with the activities in connection with the Factories and Shops Act give little space to the question of child labour. The New South Wales report for 1920 shows that 180 (142 males, 38 females) special permits for employment were given to children of the age of thirteen years; also that 7,129 (males 3,603, females 3,526) certificates of fitness were issued, while five persons were rejected. In 1921 the certificates issued in Queensland amounted to 1,025 (males 396, females 629). None of the other States mention the certificates of fitness, but they give the numbers of minors employed. In Western Australia 104 females of the age of fourteen years are stated to have been employed, which apparently is contrary to their Act.

Points for Consideration.

Are the legislative provisions for the protection of young persons in industry sufficiently wide?

Are sufficient safeguards against the risk of permanent damage to the physical and mental development of youthful workers provided?

The following matters are submitted for particular consideration:—

- (1) The desirability of raising the minimum age for employment in all States to the requirements of the Victorian and Western Australian Act—viz., fourteen years of age for males and fifteen years of age for females. The circumstances under which exemptions may be granted.
- (2) The requirements of certificates of fitness before employment in all factories in all States. This would enable remediable minor defects to be rectified before employment.
- (3) The provision for annual medical examinations of all workers under the age of eighteen years, with such additional re-examinations as the medical examiner may consider necessary.
- (4) The appointment of certifying factory surgeons for the purpose of conducting examinations under the Factory Act requirements.
- (5) If certifying factory surgeons be appointed, the keeping of proper record cards for every examination performed by them, these records to be available at each examination.
- (6) The making available to the certifying surgeon of the medical records of the Educational Departments of children seeking employment.
- (7) The extension to other States of the provisions already made by New South Wales and Queensland relative to medical re-examination when considered necessary by the inspector.

2.—FEMALE LABOUR.

"Productivity is the keynote of the times. Every nation is calling for increased production to repair the enormous destruction the Great War has brought upon the world's wealth—i.e., its surplus production. No nation can afford to leave any source of energy unused, and, certainly, not half its population, unless an overpowering racial reason exists." For this reason the employment of women in industry has evidently become an established fact to be reckoned with, and it is of importance to the public health to decide whether the effects of occupation are of so damaging a nature that harm to the nation as a whole is resulting. Employment under some of the conditions existing in the past has had, on the whole, an injurious effect upon the health of women, but there is no apparent reason why industrial occupation of women under satisfactory hygienic conditions should prove other than a national benefit. In considering the employment of women regard must be paid to the physiological differences between them and men and to women's potential function of motherhood and child-bearing.

If the conditions of employment of women are such as to allow her physical strength to be overfatigued or her bodily resistance to infection to be lowered, or her body under-nourished, greater or less injury must result to her capacity for motherhood, and so prevent her from contributing her highest service to the nation.

According to the "Commonwealth Year-Book," No. 14, 96,220 females were employed in the factories of the Commonwealth during 1919-1920. The number of females in factories is gradually increasing. In 1915 there were 333 female employees per 10,000 of mean male and female population; in 1919-20, 371. Unfortunately in Australia, as in the rest of the world, reliable statistics as to mortality or morbidity of women industrial workers are not available, and, therefore, the statements so frequently made that women industrially occupied suffer a greater sickness incidence than men must be more or less discounted. In view of the immense national importance of safeguarding women employed in industry, it is obvious that scientific measures should be taken to collect definite information as to the effects of occupation upon them, particularly data regarding morbidity. The various State Factories and Shops Acts and regulations impose on occupiers of factories already a large number of returns regarding their employees, but there is no doubt that a study of labour turnover and absences would afford a reliable guide to the healthfulness or otherwise of the numerous factories. A high labour turnover or a heavy rate of absence from work certainly calls for a close investigation of the working conditions, particularly if the majority of workers are leaving in the first two or three months after engagement. For the thorough investigation by scientific methods into the physical effects of employment upon girls and women, the appointment in each State, particularly New South Wales and Victoria, of a women medical inspector seems worthy of consideration.

In all the States legislative safeguards regarding the employment of females have been provided. The hours of work have been limited, night work has been prohibited, in Queensland Sunday work has been banned, and certain trade processes have been prescribed. The legislation presents a lack of uniformity in regard to the restrictions against employment in the trade processes specified. For example, in the process of making white lead, New South Wales, Victoria, South Australia, and Tasmania limit employment to females eighteen years of age and over. Queensland and Western Australia absolutely prohibit employment. Victoria and South Australia have special provisions for females regarding the lifting of weights and employment as type-setters in printing offices. Every State, with the exception of South Australia, has made provision for seating accommodation for females; Victoria has amended her Act to enable the Minister to call upon the occupiers of any factory, shop, or place, to provide a rest room for female employees. Every State, except South Australia, requires dressing rooms to be provided for female employees. New South Wales and Western Australia are the only States that restrict the employment of females after confinement, the former prohibiting females from working during the four weeks immediately after the confinement, and the latter six weeks. Western Australia also prohibits employment of females during the six weeks immediately prior to confinement.

Points for Consideration.

1. The advisability of the reform and extension of the State Factories and Shops Acts in the following directions:—
 - (a) The adoption of uniform restrictions against employment of females in specified trade processes.
 - (b) The adoption of uniform restrictions against employment of females prior to and after confinement.
 - (c) The adoption of uniform restrictions against heavy-weight lifting by females. The encouragement of labour-saving devices.
 - (d) The provision of adequate seating, rest and dressing-room accommodation for female employees.
 - (e) The furnishing of returns indicating female labour turnover and absences from work.

2. The advisability of the appointment of female medical inspectors or other means of securing a more thorough supervision over female workers individually and collectively.

3.—OCCUPATIONAL DISEASES.

The first duty of any State is to prevent damage to its workmen by accident or industrial disease, as the death or disablement of a workman entails an economic loss to the State, whose highest object is to maintain and improve national efficiency, of which national health forms one of the most important factors.

All the States have recognised that industrial workers must be compensated for physical injury sustained through occupation, and in New South Wales, Victoria, South Australia, and Queensland, compensation is also granted for certain specified occupational diseases. Compensation, however, is a poor substitute for health and physical ability. The cause of accidents and of industrial disease needs the closest investigation if repetitions are to be avoided, but although every State except Tasmania requires occupiers to report cases of accidents of specified severity occurring in their factories, in no State is the notification of industrial disease required from medical practitioners. In Victoria power has been given under the Health Act to the Health Commission to make regulations dealing with certain specified dangerous trades, and to prescribe notification by medical practitioners of disease arising from occupation in these specified trades.

It is evident that if the prevention of industrial disease is to be satisfactorily accomplished, the enforcement of compulsory notification by medical practitioners of every case of disease due to occupation coming under their notice, and an investigation into the working environment of every case so notified seems very advisable.

Points for Consideration.

1. The compulsory notification by medical practitioners of all cases of industrial disease. The Department to be notified?
2. The advisability of the appointment of a factory medical officer to investigate all cases so notified, with a view to remedial measures against recurrence of similar cases.
3. If suggestion (1) is agreed to, the appointment of a committee to draft an Occupational Diseases Notification Act.

4.—MORBIDITY STATISTICS.

Proper inquiry into the conditions under which the industrial classes carry on their occupation is always hampered by the lamentable lack of statistical evidence of the sickness experience of the workers engaged. This fact was strikingly demonstrated at the 1921 inquiry of the New South Wales Board of Trade into the dangers of white lead and their prevention. Although numerous statements were made as regards the ill consequences, or lack of ill consequences, following the use of white lead in paint, no statistical evidence was afforded to support any of the claims made as regards the occurrence or non-occurrence of sickness among painters. No statistics exist of the sickness experienced by the community at large corresponding to those for mortality. Even the mortality statistics published in the Australian Year-Books afford little information of value as regards the effects of occupation upon health and longevity. The only statistics regarding sickness published in the Australian Year-Books relate to the sickness experience of the friendly societies, but these give no information as to the causes of the morbidity nor the occupations followed by the members.

Every one knows that certain occupations, apart from the so-called "dangerous trades," lead to a liability of poisoning, disease, and high mortality, but it is the lost time and incapacity due to sickness and fatigue caused by a complex set of industrial factors, mostly controllable, that is so highly important.

It is not usually recognised that industrial diseases are exceedingly common, and the causes of the symptoms to which they give rise are, in the overwhelming majority of cases, overlooked both by the worker and the medical practitioner

called in to afford relief. The advantage of the collection of morbidity statistics according to the occupations followed is that—were any given industry shown to have an excess of sickness—the direction is given into which ameliorative research could be conducted.

The collection of these statistics, however, bristles with difficulties, and can only be undertaken by trained statisticians. The principal channels through which this valuable data might be obtained are three in number:—

1. The Friendly Societies.—Here information as to the sickness experience, according to occupation and age, of the members would be available without much difficulty, but the causes of sickness would be, at present, almost impossible to ascertain.
2. The Public Hospitals.—The registrars of hospitals could afford any information required, provided accurate descriptions of the occupations of the patients were taken.
3. Large Industrial Concerns.—If medical officers are on the staff, most of the information desired could be obtained, otherwise only the labour turnover and time lost by individual workers per year could be made available.

The advisability is evident of making a systematic attempt to collect all available data regarding the incidence of occupational sickness and the cause of this sickness. To do this, standard tables of sickness are required, distinguishing between the sexes, and in the case of women also between married and single, analyzing the causes of morbidity, and giving a classification of occupations, as there are too many individual occupations to ever attempt to show them separately. Lastly the tables should show the sickness incidence and causation according to broad age groups.

The desirability of collaboration between the Statist and Labour Departments is well emphasised in connection with the returns of accidents shown in the various State Labour Departments' Annual Reports. If uniform methods of reporting accidents were adopted by all States, according to standardised methods, useful comparison could be made of accident frequency, not only between the Australian States, but also between Australia and other countries.

Points for Consideration.

1. The collection of morbidity statistics.
2. Standardisation of methods.

5.—HYGIENIC STANDARDS IN INDUSTRY.

The industrial worker, unlike the man of means, is unable to choose his hours of work or to control his environment while at work. He must look to his employer to provide fresh air, good lighting, and other conditions that make for health and longevity. As the employee must largely accept the conditions as he finds them it is evident that it is the function of the State to champion his right and insure, as far as practicable, that he is not subjected to environments liable to cause injury to health. The various State Factories and Shops Acts require certain safeguards and prescribe measures regarding air space per employee, ventilation, &c., but these measures are not altogether adequate. Definite standards regarding ventilation (with particular reference to temperature, humidity, and air movement), lighting, dust prevention (exhaust systems), seats, rest room, ambulance and first-aid facilities, are wanting. It is only necessary to briefly summarise the existing statutes to realise this:—

Air Space.—New South Wales, Victoria, Queensland, South Australia, and Tasmania require 400 cubic feet, and Western Australia 350 cubic feet of clear air space per employee, the maximum height taken in calculating the air space being 14 feet in all the States, except Victoria and Queensland, where 13 feet only is allowed. Queensland and Western Australia require an additional 400 and 350 cubic feet respectively for every gas-light used.

Ventilation.—Each State lays down a standard of 12 square inches of inlet and 12 square inches of outlet opening for each

person employed. New South Wales has laid down a purity of air standard in which restriction on the amount of CO₂ gas in the air is made, eight parts of carbonic acid gas per 10,000 being the permissible limit during daylight. New South Wales and Queensland are the only States to regulate regarding the temperature of working places, New South Wales laying down maximum and minimum temperatures, while Queensland specifies that no room in which employees are at work shall exceed by 3 deg. the then normal shade temperature outside. Victoria and Queensland also prescribe that means and appliances for efficiently warming factories shall be provided, and Western Australia gives power to the Chief Inspector to require building roofings to be coated with cooling substances. New South Wales is the only State to prescribe standards of humidity, although every State except Western Australia has a section in their Acts regarding wet spinning rooms. None of the States have taken cognizance of air movement (kata-thermometer).

Lighting.—New South Wales is the only State that lays down any standard regarding light, and this standard is not in conformity with the general requirements of standards laid down in other parts of the world.

Dust Prevention.—No standards for efficient dust exhausts have been prescribed.

Sitting Accommodation.—New South Wales, Queensland, and Western Australia have prescribed seating accommodation for females in factories, but no standard has been laid down for the seats, nor is any mention made of males.

Rest Rooms.—Victoria is the only State in which power is given to the Minister to require the occupier of a factory to provide rest rooms for female employees. Western Australia makes this provision for restaurant and tea-room employees.

First Aid Facilities.—Victoria and Western Australia require that first aid ambulance chests shall be provided in every factory where mechanical power is used. No mention is made of an attendant skilled in first aid to take charge.

Points for Consideration.

The desirability of the appointment of a committee to formulate standards on the following subjects:—

- Ventilation.
- Lighting.
- Dust Prevention (exhaust systems, &c.).
- Sitting Accommodation.
- Rest Rooms Provision.
- Dining Room Provision.
- First Aid Facilities.

6.—FACTORY INSPECTION.

The purpose of all labour legislation is the protection of the working population. Originally this protection was confined to the regulation and restriction of child and female labour, but a considerable expansion has taken place, until to-day the labour laws embrace not only the questions of wages and hours, but of prevention of disease. Labour laws, no matter how numerous, do not in themselves protect the worker; this protection is gained only by their rigid enforcement. An efficient system of factory inspection requires good comprehensive basic laws and a capable corps of inspectors. Factory inspectors have not only to be thoroughly familiar with the law, but also with the processes of manufacture and the problems of preventive medicine. They also are called upon to make recommendations outside of the strict regulations under which they operate, so as to improve conditions and meet the needs of an ever-changing situation. Factory inspectors have to be well informed regarding machinery and to be able to advise on methods of safeguarding against accidents. They need to be acquainted with the possible injurious effects of certain processes, and to be able to intelligently inspect devices designed to protect the employees against dangerous fumes and dusts.

In Europe factory inspection is regarded as a profession and a vocation calling for abilities and education of no mean

order. If real and adequate protection is to be afforded to the worker and the purpose of labour legislation thereby fulfilled, the raising of the status of the factory inspector must be considered. The creation of facilities for the proper training of factory inspectors is obviously desirable. It would considerably aid them in their duties if arrangements were made for them to receive instruction in the elementary principles of factory hygiene, particularly in the following:—

Ventilation.—Principles of efficient ventilation, natural and artificial. Temperature, humidity, air movements. How to use wet and dry bulb thermometers and kata-thermometers.

Lighting.—Principles of efficient illumination, natural and artificial. Measurement of degree of illumination at any specified point.

General Hygiene.—Principles of hygiene.

Industrial Health Hazards.—Specific occupational poisons, their modes of attacking the body. Measures for prevention.

Consideration has been given elsewhere under the heading of child labour, female labour, and occupational diseases, to the advisability of the appointment of male and female factory medical inspectors. The possession of medical qualifications by persons appointed as factory inspectors would place them in a position to make the best use of facts regarding the sanitary conditions of premises where men and women work, to study the possible injurious effects of certain processes, to inspect devices designed to protect the employees against injury or against dangerous fumes and dust and to judge the effects on the health of workers of such substances, as well as to detect the symptoms of certain poisons incidental to such occupations, to make physical examinations of young persons and to collect and make proper use of all data, including morbidity and mortality statistics, pertaining to occupational disease.

Points for Consideration.

1. Provision of educational facilities for factory inspectors.
2. The appointment of male and female medical factory inspectors.

7.—MEDICAL SUPERVISION OF PERSONS ENGAGED IN INDUSTRY.

The responsibilities incumbent upon employers with respect to their employees cannot be better described than in the following quotation from Collis:—

"Few employers have ever seriously set themselves to consider what is the relation of industry in general, and their own industry in particular, to the community; or realised that modern developments, due to the invention of power-driven machinery, have introduced a complexity into the social state previously entirely unknown. In the beginning the one necessary occupation was agriculture for the production of food, with other minor industries, such as the manufacture of clothes and the building of dwellings, as auxiliary trades. Industry existed then to serve the community and provide it with means for living as healthily as was then possible, with food to sustain life, and with clothes and houses to protect against the weather. At the same time it reacted on those whom it served by stimulating to forethought in the use of their energies, and by drawing out their developing intelligence. Thus industry has been the ruling factor in determining the physical and mental evolution of the human race. Surplus industry which is wealth, gave rise to social distinctions, and out of these in the course of centuries grew civilised communities; at each stage the primitive purpose of industry became more and more overlaid. In the last two centuries industry has become vastly more complex than ever before; and in the complexity sight has practically been lost of the reason for its existence—viz., to serve the community. It appears now as never before to provide opportunities for those with special capacity to acquire prizes in the form of material wealth; and there is a tendency in seeking to acquire these prizes to forget they must not be won at the expense of the community

or of a part of the community; or that prizes are only rewards for good scholars and not the end and object of education. Industry, while holding out these incentives, must remain the servant of the community; and not be converted merely into means whereby the few may amass wealth. The community, represented by the workers; who form the great majority of the community, always objects when the primary purpose of industry is forgotten—viz., the provision of means for living as healthily as possible.

"A modern nation is made up of those engaged in its trades and industries; but trade after trade is accustomed to claim that the economic position of the moment is such that this purpose is difficult, if not impossible, of attainment if adequate profits are to be made. Yet, unless traders and industries place first the purpose of their existence, and not the prizes, the nation as a whole fails to be served by its industries, and becomes either an unwilling slave dragging at the chafing manacles of ill-being or actively revolutionary. Modern industry wrought by progress on the anvil of utility is a tool intended for welfare; and the first duty each industry owes to the community is to provide for those whom it employs conditions of life as good as modern knowledge can ensure.

"Few, if any, familiar with the conditions of modern industrial life will maintain that this duty has been placed first and before the requirements of the process and the machine. Where the machine has required space, the worker has shared it; where the process has required light, the worker has been allowed it; where dust spoilt the product, the worker has breathed a clean atmosphere; but the provision of space, light, or clean air for the worker, as a delicate living organism, has not been a first consideration, and he has been expected to live where less delicate vegetable life would decline to exist."

The recognition on the part of the employer of his responsibilities in this respect would greatly advance the health of the industrial worker. If the employer accepts the axiom that "No industry ought, *per se*, to exert injurious influences upon the health of the worker," then he would take all measures necessary to ensure that the working conditions in his plant were made as safe, from a health viewpoint, as could practically be attained. To do this, he would need to invoke the assistance of the physician, who would make a survey of the different trade processes, indicate the potential risks to health and the measures to adopt to reduce these risks to a minimum, and also conduct periodical examinations of the employees to make certain that no damage to health is resulting from the occupation.

RESOLUTIONS OF CONFERENCE.

After discussion the following resolutions were moved and passed by the Conference:—

- (1) That in the opinion of the Conference all persons employed in factories and workshops should be medically examined before employment and in each year of employment until the person has completed his or her eighteenth year.
 - That a certificate of fitness should be furnished on initial employment in each case at or under the minimum statutory age for employment.
 - That medical examinations should be made more frequently than annually if the medical examiner considers this necessary in any individual case.
 - That all medical examinations should be made by specially authorised medical officers.
- (2) That standardised record cards for every examination performed should be kept by the medical examiners, and these records should be available at each re-examination.
- (3) That the medical records of the Education Departments should be available to the authorised medical

inspectors in respect of any child seeking employment in factory or workshop.

- (4) That it is desirable that the legislation in all the States prescribing the minimum age for employment be made uniform.
- (5) That the minimum age for employment in factories and workshops be not under fourteen years for boys and fifteen years for girls.
- (6) That the Division of Industrial Hygiene of the Commonwealth Department of Health take steps to acquire all available information necessary to enable recommendations to be formulated in regard to paragraphs 1 and 2 of page 8 of the Conference Agenda (quoted in page 7 of this report, under heading "Points for Consideration").
- (7) That it is desirable that each State should have in effective operation legislation controlling occupations dangerous to the health of those employed therein.
- (8) That all occupational diseases should be notifiable by medical practitioners and that notifications should be made direct to the Health Department of the State.
- (9) That in the opinion of this Conference factory medical inspectors should be appointed.
- (10) It is the opinion of this Conference that it is very desirable that there should be collection of morbidity and accident statistics upon uniform lines, and that the Commonwealth Statistician be asked to draft a uniform scheme.
- (11) That it is desirable that a committee should be appointed to draw up standards of qualification for factory inspectors and the nature of the course of study necessary before such qualification can be obtained.
- (12) That in the opinion of this Conference the provisions of the Factories and Workshops Acts should extend to factories carried on or conducted by the Government or by any local authority as well as to factories otherwise carried on or conducted.
- (13) This Conference considers that in view of the importance, as a phase of public health administration, of systematic medical supervision of the health of individual industrial employees, and of the valuable information and results which have been obtained from the introduction by private employers of a medical service for their establishments, all employers, including Governments, should be encouraged to provide an efficient and regular medical service which shall keep under review the health of the workers, and shall inquire as to any relation between variations in health and conditions of employment. Moreover, in order to secure the greatest amount of public benefit from this measure, records of work done should be kept in a standardised method.
- (14) That the Division of Industrial Hygiene of the Commonwealth Health Department, together with Mr. Murphy, Secretary, Department of Labour, Victoria, should be the committee to deal with the resolution relating to qualifications of factory inspectors.
- (15) That the formulation of hygienic standards in industry be referred to the Division of Industrial Hygiene of the Commonwealth Department of Health.
- (16) That all information obtained by the Division of Industrial Hygiene or by a committee in accordance with previous resolutions be submitted to a future conference for further discussion and for the formulation of recommendations in regard thereto.

The report of the Conference as above was adopted.

A vote of thanks to the chairman was carried.

Factory Accidents Reported upon during November, 1922.

| Class of Factory and Employee. | Nature of Injury. | Time Absent through Injury. |
|---|---|-----------------------------|
| Clothing and Cleaning— | | |
| (Clothing Factory, Ipswich)— Machinist (19) .. | Finger pierced with needle whilst machining | 1 week |
| Coat Machinist (28) | Dislocated elbow through fall from sully on her way to work | 4 months |
| Woolen Cloth Factory, Ipswich)— Engine-driver (60) | Head, face, and arms burnt through bursting of steam pipe | 6 weeks |
| Engineering and Founding— | | |
| (Machine Tool Factory, Brisbane)— Press Operator (19) | Second finger of left hand crushed .. | 6 weeks |
| Press Operator (15) | First finger of right hand crushed .. | Still absent |
| (Interlocking Works, Brisbane)— Apprentice Moulder (19) | Left thumb developed an abscess— cause uncertain | 1 month |
| Ironworker's Assistant (63) | Left leg poisoned | 3 weeks |
| Furnaceman (63) | Right foot burnt | 2 months and two weeks |
| (Stove Works, Maryborough)— Foreman Fitter (Adult) | Body strained whilst trying to release a sheet of iron which had become caught | 3 weeks |
| Blacksmith's Striker (Adult) | Shin of right leg bruised through blow from plow scraper which he trod on | 2 weeks |
| Moulder (20) .. | Back strained whilst lifting a box containing a mould | 2 weeks |
| (General Engineering Works, Maryborough)— Young Labourer | Forearm bruised through striking boiler studs while assisting riveter | 10 days |
| Boilermaker (Adult) | Foot crushed by plate of steel which fell on to it | 2 weeks |
| Fitter (Adult) .. | Right hand crushed with cogs of machine which he was cleaning | 10 days |
| Apprentice Fitter | Knee sprained through tripping on the frame of a tender | 3 weeks |
| Apprentice Fitter | Right foot crushed through being caught in turntable | 6 days |
| Labourer (Adult) | | 2 weeks |
| Food and Drink— | | |
| (Bacon Factory, Oxley)— Slaughterman (26) | Left thumb cut with knife which slipped whilst he was taking the leg off a calf | 2 weeks and 4 days |
| Housing and Furnishing— | | |
| (Furniture Factory, Brisbane)— Machinist (37) .. | Body bruised by timber which jammed on saw and sprang back | 4 weeks |
| (Furniture Factory, Maryborough)— Machinist (Adult) | Finger lacerated through hand slipping into cutter of planing machine | 1 month |
| (Sawmill Ipswich)— Tailor out (43) .. | Ankle bruised through getting between logs whilst he was unloading | 5 weeks |
| Wood-machinist (34) | Foot bruised by piece of hardwood which fell on it whilst he was machining | 10 days |
| Frame Sawyer (Adult) | Foot bruised by fitch of timber which fell as he was removing it from truck | 10 days |