

MONTHLY REVIEW

OF THE

U. S. BUREAU OF LABOR STATISTICS

VOL. V—NO. 1

WASHINGTON

JULY, 1917

ERRORS IN DEATH REGISTRATION IN THE INDUSTRIAL POPULATION OF FALL RIVER, MASS.

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The value of vital statistics is coming to be generally recognized and the desirability of extending the registration area as rapidly as possible is being insisted upon more and more. No one could desire to minimize the importance of a complete registration of births and deaths, but in the course of some recent investigations into the prevalence and contributory causes of early death in the cotton manufacturing industry the writer has come across facts which make him feel that a large part of the present interest in mortality matters could be quite as profitably directed to increasing the accuracy as to extending the field of death registration.

These investigations were carried on in Fall River, Mass., for the purpose of obtaining facts as to the death hazard of male and female cotton operatives of each workroom occupation as compared with the corresponding hazard of persons of like age and sex who are not cotton operatives. The underlying idea of the studies is that "accurate age group mortality statistics of a given occupation as expressed in death rates per 1,000 of each specified population constitute the only indisputable evidence as to the healthfulness or unhealthfulness of that occupation to the persons engaged in it." The earlier of these studies, covering the period from 1905 to 1907, inclusive, has already been published.¹ The second and more intensive supplementary study which is to appear at an early date covers the succeeding five years. The two studies therefore cover the Fall River mortality within the age period 10 to 64 years for a period from 1905 to 1912, inclusive. This is roughly equivalent to the deaths in an almost exclusively industrial city of a million people for the period of a single year.

¹ Causes of Death Among Women and Child Cotton Mill Operatives, Vol. XIV of Condition of Woman and Child Wage Earners, Senate Document 645, Sixty-first Congress, first session, 1912, p. 430.

In order to secure the accurate data required, the official certificates of all deaths, aggregating nearly 7,000, that had occurred within the periods covered were first copied by employees from the registrar's office. Visits were then made to the latest Fall River residence of each decedent, where the information of the death certificate was supplemented by fuller details gained from relatives, or, if there were none of these, from friends of the deceased, respecting the latter's family, habits as to drug addiction, occupational and conjugal experiences, exposure to communicable disease, and other facts of possible significance in explaining why the wage earner had died prematurely.

Error in official registration of death.—Though this inquiry at the home of the decedent was intended solely to provide data supplementary to the explanation of the death furnished by the official certificate, nevertheless, at an early stage of the investigation it became evident that these official records contained errors as to facts, and also omissions of facts which in their results were almost as misleading as actual misstatements.

These errors were of three kinds: The actual cause of death might be misstated; the immediate cause of death might be given accurately, but the existence of other debilitating factors which probably had much to do with bringing about death at that time might be passed over unrecorded; and the decedent's occupation might be incorrectly given. The first of these errors appeared most numerous in cases in which tuberculosis was the real though not the recorded cause of death; it also played an important part in concealing the number of deaths due to childbirth. The second also was found in connection with parturition cases. The third affected both operatives and non-operatives, though in different degrees, some of each class being assigned to the other. The extent to which each of these errors prevailed, and the degree to which it was possible to correct the misleading data, will be discussed somewhat fully.

Error in the official record of deaths from tuberculosis.—There can be no doubt that the tuberculosis rate was diminished by inaccurate statement of the cause of death on the official certificate. In a large number of cases the cause of death certified to by the physician was contradicted by the history of the decedent's illness as reported by relatives. Thus, in cases in which the physician's certificate gave some such equivocal cause of death as bronchitis or hemorrhage, or some terminal conditions, such as broncho-pneumonia or heart failure or debility, relatives of the decedent testified that for possibly a year or more before death the decedent had had a bad cough, had expectorated profusely, had become extremely emaciated, had suffered from night sweats, had had one or several hemorrhages of bright

blood, and was the second or third in the family who had "died of consumption" within the last few years, or had parents one or both of whom had died long ago after years of such tuberculous manifestations. Such testimony as to matters of simple fact seems entitled to considerable credence.

Numerous instances of careless certification can be shown.

A French-Canadian woman, aged 23 years, married four years but never pregnant, for 7 years a spinner until she left the mill because of cough two years before death, was certified by her attending physician (now dead) as having died from "bronchitis." Another attending physician whose name is upon death certificates of two other family members did not "recall" this case. The seemingly tuberculous mother and brother of decedent affirmed that the latter had died from tuberculosis, "just as her father and three sisters did." These last mentioned four are certified as having died of tuberculosis between March, 1910, and August, 1912, and are so recorded in this study. Another sister was recommended to a tuberculosis hospital October, 1909, and is said to have recovered. This case was scheduled as nontuberculous.

Sometimes the statement of the certificate as to the cause of death was directly contrary to other official records. Thus one woman of 30 who died one hour after having miscarried at three months was certified as having died of congestion of the liver, and nothing on the certificate intimated that either tuberculosis or pregnancy was even a contributory death factor. Yet the decedent's brother and sister had died from tuberculosis, and she herself had been an inmate of the city tuberculosis hospital seven months before she died. The physician who signed the death certificate did not remember whether the case was tuberculosis or not. The hospital records, however, state that the case was one of tuberculosis.¹ This case was scheduled as tuberculosis complicated with parturition.

A special canvass was made to see just how commonly tuberculosis was misreported on the official death certificate. There were 188 cases in which there was marked discrepancy between the cause of death as given on the death certificate, and the cause of death suggested by the history of the decedent's illness as given by the family. Every physician who had signed one of these 188 certificates, if still living and still in Fall River, was visited and questioned about the death. By this process the probable correctness of the certified cause was satisfactorily established concerning 31 of these cases.

¹ For other illustrations of discrepancies between the cause of death as given on the death certificate and the statements of relatives as to the symptoms manifested by the patient, or the doctor's informal opinions as to the disease, see the earlier study already referred to, *Causes of Death Among Woman and Child Cotton Mill Operatives*, pp. 44, 45, Vol. XIV of the Report on Condition of Woman and Child Wage Earners in the United States.

In 65 of the remaining 157 cases no further information was obtainable, because the certifying physician had either died or left Fall River, or else professed inability to remember and no other attending physician could be found. In not a few of these 65 cases the histories indicated overwhelmingly that these deaths were due to tuberculosis. Nevertheless the certificates were taken as correct unless an admission was secured from the certifying physician that the recorded cause of death was incorrect. Consequently these 65 cases have been counted as correctly certified.

The remaining 92 cases are either admittedly or demonstrably cases of tuberculous deaths. These have therefore been classed as tuberculous throughout this study. These 92 cases may be divided into the following classes:

1. Those in which the certifying physician unequivocally stated the cause of death to be tuberculosis. These numbered 70.

2. Those unequivocally vouched for as tuberculous by a physician who had attended the decedent in his last illness but had not signed the death certificate. Recourse was had to these other physicians only because in every one of these cases the physician who had signed the certificate had either died, left Fall River, or forgotten all about the case. This forgetfulness is explained by the fact that the signers of the certificate were sometimes city physicians, who had responded to an emergency call and possibly had seen the decedent professionally only once. These cases numbered 12.

3. Those who, after a sputum examination, had been recorded on city or hospital records as tuberculous. Of these there were five.

4. Those stated by the certifying physician to have been "tuberculous probably." Two of these had not been certified as tuberculous, because no bacteriological examinations of the sputum had been made, "and so," said the physician concerning one of these, "though I knew the case was tuberculosis I couldn't actually swear it was." This group likewise numbered five.

As a result of this special canvass, it appears that not improbably one-sixth (17 per cent) of all the fatal tuberculosis in the city was misreported under nontuberculous diagnoses.

REASONS FOR ERRONEOUS CERTIFICATIONS OF DEATH.

The question of course arises why the true cause should be so often ignored or misleadingly reported on the death certificate. There seem to be several reasons for this. Some persons are sensitive as to the existence of a case of tuberculosis in their family and would seriously object to having such a cause recorded upon a certificate. The knowledge that this feeling is common may affect the physician

even in cases where no such prejudice exists. But apparently by far the most effective reason is the attitude of some of the insurance companies which may delay payment of policies of decedents officially certified as having died from tuberculosis and which also not uncommonly refuse to insure other members of the family of such a decedent. Physicians when asked about these variant cases occasionally admitted that the certificates were designedly misleading, but justified them on the ground of personal financial expediency arising from intense medical competition, and on the added ground that sometimes only through such registration practices could the decedent's family secure promptly the amount they were entitled to from the insurance companies.

Errors in the official record of deaths from parturition.—Here, as in connection with deaths from tuberculosis, cases were found in which the record was absolutely false, cases in which investigation proved the death to have been really due to childbirth, but in which the official certificate gave some equivocal or designedly misleading term to designate the cause. But in addition to this, certificates of female decedents were often seriously defective in that they failed to give parturition as a contributory cause of death even when a pregnancy had terminated within so short a period before the death that it could hardly have failed to be a very important factor in bringing it about. Since the death certificate is supposed to give the contributory as well as the main cause of death, it is evident that such an omission may have almost as misleading effects as the failure to designate properly the principal cause of death. Indisputably these omissions have served to obscure the real risks involved in pregnancy.

Let us take up first the cases in which the official certificates contained absolutely erroneous statements as to the cause of death. In 34 cases in which death was immediately and indisputably the direct consequence either of parturition or of its gross mismanagement, the death record contained not the slightest intimation that pregnancy or childbirth had been in any way the cause, or even a contributory cause of death. In one case, for instance, a woman of 32 died without having regained consciousness after an operative delivery. Her death was certified as due to shock, with no intimation that four hours before death a baby had been born. In another case in which the certificate gave hemorrhage as the cause of death, investigation proved that it was due to intentional abortion. In another case a woman died one hour after a forceps delivery. The certificate ascribed her death to embolism, without even a suggestion that parturition had played any part in bringing it about. Cases of this

kind formed one-fourth (26 per cent) of the actual parturition cases¹ occurring in Fall River during the period of this study.

Of these 34 cases, 11 died from puerperal septicemia; 5 from puerperal nephritis (i. e., eclampsia); 7 from puerperal hemorrhage; 4 from embolism; 1 from shock coincident with childbirth; and 4 from pneumonia, ending within 10 days after the birth of a full-term baby. As it was not claimed that any one of these four latter cases had any pulmonary symptoms other than fever, and as the certifying physician was one who had admitted misregistration of cases of tuberculosis, it is overwhelmingly probable that these four cases were actually puerperal septicemia. And finally, two cases were officially reported under miscellaneous designations, each obviously having been speedily fatal through parturition.

In these 34 cases the proof that the death was really due to pregnancy or parturition was so strong that the official certificate has been disregarded and the deaths have been classed as due to parturition.

In 26 other cases in which pregnancy had terminated within 30 days preceding death, the certificates contain no mention of either pregnancy or parturition as contributory causes of death, and indeed give no intimation that such a state of affairs had existed. Yet it is evident that where a pregnancy has terminated within so brief a period before death it is hardly possible that it should not have been in some degree a contributory cause. In these cases, therefore, while the cause of death as given on the certificate has been retained and used, the record has been completed by including parturition as a contributory factor. Of these 26 deaths 14 are officially ascribed to tuberculosis, 3 to typhoid fever, 4 to pneumonia, and 5 to miscellaneous noninfectious causes. One of these last was a case of criminal abortion, in which the cause of death was officially given as "heart stopped."

To sum up the situation, in Fall River during the period 1908 to 1912 there were 163 female decedents who had a terminated pregnancy within 30 days of their deaths. In 120 cases the deaths were clearly attributable to parturition; in 43 cases, although some other cause was accepted as the principal factor, parturition was plainly a very important contributory cause. In 60 cases, or 37 per cent of the whole number, the death certificates gave no intimation that pregnancy or parturition had had any connection with the death, yet in 34 of these 60 death was clearly due to parturition. The detection and correction of these 60 cases of erroneous or incomplete certifications makes an important addition to the knowledge of the hazards of pregnancy and parturition.

¹Deaths from parturition include here every fatal case in which a pregnancy at any stage (including full term) had terminated not more than 30 days before death occurred.

Error in official record of decedent's occupation.—In addition to the errors concerning the causes of death, whether principal or contributory, the records were found to be seriously inaccurate in their statements concerning the decedent's occupation. Fortunately it was possible to correct these errors to a very considerable degree, far more so than to correct errors in the alleged causes of death. As stated above, the physician's official statement as to the cause of death was accepted unless the original certification was admittedly or evidently wrong. This policy was followed no matter how seriously the correctness of the certificate was doubted. But a similar adherence to the record was not considered necessary in regard to the statement of the decedent's occupation, this being a matter on which the physician's professional training would have no bearing, and of which neither he nor the hurried and sometimes careless undertaker probably had personal knowledge. When, therefore, a statement by relatives or friends as to the occupation of a given decedent differed from that of the death certificate, the former was taken as authoritative.

The errors of the death certificates as to occupation were both of omission and commission. Persons who were really cotton-mill operatives were not so recorded. Others were set down as operatives who had never worked in a cotton mill or who had not done so for more than two years preceding death.¹ The former error was the more common among female and the latter among male decedents.

The extent of these errors as accurately determined in Fall River for the whole eight-year period—1905 to 1912—shows most conclusively the seriousness of the misapprehension which would be caused by using the official certificates without investigation of their accuracy.

For the eight-year period nearly one-half (49 per cent) of the female decedents who were found to have been cotton-mill operatives were not so recorded. On the other hand one-eighth (13 per cent) of the females recorded as operatives were found on investigation not to have been cotton-mill operatives. Among the males for the same period, 23 per cent of those who were finally classed as cotton operatives were recorded on the death certificates as following some other occupation, while one-fourth of those recorded as operatives could not properly be included among cotton-mill workers.

The recorded number of male operative decedents in Fall River for the eight-year period (1905-1912) was 915. Of these 233, or 25 per cent, were found not to have been cotton-mill operatives, while 207, who on their death certificates were assigned to other occupa-

¹ A considerable part of this error is due to the vague use of the term "operative," which is frequently employed on death certificates with nothing to show whether the person concerned worked in cotton or woolen mills, in dye works, bleacheries, or printeries, or in piano or hat factories.

tions, were really cotton-mill operatives at the time of their death. The real number of male operative decedents, therefore, was 889, the group as recorded having been larger by 26 than the facts justified.

On the other hand the recorded number of female operative decedents in Fall River for the eight-year period was 548. Of these 71, or 13 per cent, were found not to have been cotton-mill operatives, while 459, who were recorded either as having other occupations or no occupation at all, proved on investigation to have been really cotton-mill operatives. This gives a total of 936 decedent female operatives.

CONCLUSIONS.

There is no reason to suppose that the official registration of deaths is more carelessly or recklessly performed in Fall River than elsewhere; indeed, in view of the advanced position which Massachusetts has taken in regard to vital statistics there are grounds for the opposite supposition. It is believed, therefore, that the facts disclosed in this summary show:

(1) That there is urgent need for a closer supervision of death registration, and for a sustained effort to secure greater accuracy and a nearer approach to completeness in the certificates filed.

(2) That a small minority of the physicians of a city or State are able most seriously to retard progress in industrial hygiene and preventive medicine, through their failure, admittedly sometimes intentional, to give intelligent compliance with the death registration requirements of the law.

(3) That under present conditions death certificates need careful verification before any but the most general conclusions respecting early death in industry may be safely drawn from them. In particular, deductions as to the prevalence, the increase, or the decrease within any specified age group of fatalities from causes like tuberculosis and parturition, or as to the effect of a given occupation upon those of a designated age who follow it, are liable to be wide of the truth if based upon the death data of the registrar's office, unless such data are first subjected to the detailed investigation described above.

CARE OF DEPENDENTS OF ENLISTED MEN IN CANADA.

The necessity of making adequate provisions for the maintenance in reasonable comfort of the dependents of the men enlisted or drafted into the United States Army and Navy is apparent to all. In order to devise a satisfactory system to take care of dependents, common sense dictates that the United States should study the experiences of the other belligerent countries in dealing with this important question, so as to avoid the mistakes made and to adopt the commendable features. To make such an investigation Mr. S. Herbert Wolf, a well known consulting actuary of New York, was authorized by the Secretary of Labor to visit Canada to study the methods there adopted for insuring the lives of soldiers and caring for their dependents. The report of his investigation, accompanied by copies of laws, orders, forms, etc., are included in a bulletin of the Children's Bureau¹ of the United States Department of Labor. In his report Mr. Wolfe says:

It may be stated as a broad general proposition that every other nation in the war grants benefits in varying degrees to dependents (the destruction of property in Belgium and the occupation of her territory by the enemy has temporarily halted her efforts), but the standards of living differ so radically from ours in nearly all of them that we can derive but little benefit from a study of their methods. In Canada, however, we find a situation more nearly comparable to our own.

Payments are made to dependents of an enlisted man while he is in the service and also after his discharge. In the first instance the dependents receive assistance from four sources:

1. Enlisted men (not officers) are required to assign at least one-half of their monthly pay, but not more than 20 days' pay each month.²

2. The Canadian Government grants to dependents a separation allowance, based on the rank of the soldier, as follows: Privates, \$20; sergeants, \$25; warrant officers and lieutenants, \$30; captains, \$40; majors, \$50; lieutenant colonels, \$60. This is a flat allowance, irrespective of the needs of the beneficiary.³

3. In certain localities in Canada families of enlisted men are protected by life insurance, the premiums on which are paid by the municipality in which the soldier resided at the time he enlisted. In all cities except Toronto the policies have been issued by private companies domiciled in the United States. In Toronto three-fourths of the insurance is carried by the municipality. The face of each

¹ United States Department of Labor, Children's Bureau: Care of Dependents of Enlisted Men in Canada, by S. Herbert Wolfe. Miscellaneous series No. 10. Bureau publication No. 25, Washington, 1917, 56 pp.

² Appendix I of the publication under review gives the amounts of pay and allowances of officers and men in the Canadian Expeditionary Force.

³ The British Government scales the allowance made to families of British Army reservists residing in Canada according to the number of dependents. A table of allowances is given in the report.

policy is \$1,000 and the protection runs from the time of enlistment to the death of the soldier, or six months after his discharge or resignation. At the time of the investigation (May 14, 1917) \$42,297,000 of insurance was outstanding in Toronto, of which the city carried \$32,297,000 (76.4 per cent). At that time, also, the death claims amounted to \$1,738,000, of which the city of Toronto had paid \$930,000 (53.5 per cent). In most cases the amount is paid to beneficiaries in monthly installments of \$30 each and the city allows interest at the rate of 4½ per cent per annum on the unpaid balance.¹

4. The fourth source from which beneficiaries may receive assistance is the Canadian Patriotic Fund, incorporated in August, 1914,² for the purpose of "rendering financial assistance to the dependent relatives of men enlisted on active service with the military and naval forces of the British Empire and its allies." Although receiving the cooperation of the Government and having its accounts audited by the auditor general, the organization is not directed nor its funds disbursed by the Government. These funds are supplied by voluntary contributions from annual grants made by some of the Provinces of Canada,³ and by grants from cities, counties, and similar political subdivisions.³ In the case of voluntary contributions, each locality raises its own fund but does not disburse it, the amount being deposited in a bank subject to withdrawal only on authority of the head office. By effective supervision, it is stated, the greatest economy of administration has resulted and practically every cent collected from contributors has gone or will go to the relief of dependents, the interest allowed upon deposits taking care of the administrative expense.

From September 1, 1914, to April 20, 1917, the receipts of the patriotic fund from the Dominion of Canada amounted to \$22,981,615.51, and the disbursements amounted to \$16,875,634.32, leaving \$6,105,981.19 on hand for future distribution.

It may be interesting at this point to give in full the schedule of assistance, based on the cost of living in Toronto, Montreal, and other large cities, which is not to be exceeded, but which may be somewhat lowered where living is less expensive:

	Per month.
1. Wife, having no children (in receipt of \$20 per month as separation allowance and \$15 or more per month as assigned pay) may, if in need, receive from the Canadian Patriotic Fund-----	\$5. 00
2. Wife and one child:	
(a) If the child is under 15 and over 10 years of age-----	17. 50
(b) If the child is under 10 and over 5 years of age-----	14. 50
(c) If the child is under 5 years of age-----	13. 00

¹ Appendix III of the bulletin presents the form of application for Toronto civic insurance.

² An act to incorporate the Canadian Patriotic Fund appears in the report as Appendix VIII.

³ Authority for these payments is obtained by acts which are reprinted in the report as Appendixes II, IX, and X.

	Per month.
3. Wife and two children:	
(a) If both children are between the ages of 10 and 15 or if one between 10 and 15 and the other between 5 and 10.....	\$22.00
(b) If both between 5 and 10.....	17.50
(c) If one is between 5 and 10 and the other 5 years old or less...	17.50
(d) If both are under 5 years of age.....	16.00
4. Wife and three children:	
(a) If all three are between the ages of 10 and 15, or if two are between 10 and 15 and the third under 10, or if one is between 10 and 15, two between 5 and 10.....	25.00
(b) If all three are between the ages of 5 and 10, or if two are between the ages of 5 and 10 and the third younger, or if one is between the ages of 5 and 10 and two are younger...	20.50
(c) If all three are under 5 years of age.....	19.00
5. Wife and four children:	
(a) If the family includes one child between 10 and 15, and a second child between 5 and 15, no matter what be the ages of the other two.....	28.00
(b) If including one child between 5 and 10, and the other children being of this category or younger.....	23.50
(c) If all four are under 5 years of age.....	22.00
6. Woman and five children:	
(a) If the family contains one between 10 and 15 and a second child between 5 and 15, no matter what be the age of the other children, the maximum allowance may be given, which is.....	30.00
(b) If the family includes one or more children between 5 and 10 and others younger.....	26.50
(c) If all the children are under 5 years of age.....	25.00
7. Woman with six children:	
(a) If the family contains one child between 10 and 15 and a second child between 5 and 15, no matter what be the age of the others, the maximum allowance may be given, which is...	30.00
(b) If the family contains one or several children between 5 and 10 and others younger.....	29.50
(c) If all the children are under 5 years of age.....	28.00
8. Woman with seven or more children, no matter what be their ages, may be given the maximum allowance of.....	30.00
<p>The above applies to wives of men who have joined the Canadian Expeditionary Force, where they are in receipt of separation allowance from the Government. It does not apply in this form to the families of British reservists, nor to French, Belgian, or Italian families, whose separation allowance differs from that allowed by the Canadian Government.</p>	
9. Widowed mother:	
If she depended entirely for support on an unmarried son who has joined the Canadian Expeditionary Force, she may, if in need, receive from the Canadian Patriotic Fund a monthly allowance not to exceed.....	10.00
10. Parents:	
If the parents of a soldier in the Canadian Expeditionary Force are both old and incapable of work and if they were entirely dependent on the soldier they may, if in need, receive from the Canadian Patriotic Fund a monthly allowance not to exceed...	20.00

The practical effect of this schedule is that the wife of a private having three children between the ages of 10 and 15 would receive the following monthly allowance, upon the assumption that he assigned the minimum portion of his pay allowed:

From the assigned pay of the private.....	\$15
As separation allowance.....	20
From the Canadian Patriotic Fund.....	25
Total.....	60

It is stated that the allowance at this figure continues as long as the soldier remains in the over-seas service or until some change in his status or that of the family takes place, such as his change in rank, the death of a child, or the passing of a child beyond the age of 15. Supervision of each family is constantly exercised.

The Canadian Patriotic Fund and its method of administration would seem to have had a beneficial effect upon every side of Canadian life which it has touched. It has furnished a great incentive to enlistment, as cases in which men have come to the local office of the fund to inquire what the fund will do for their families should they enlist have been so frequent as to justify the belief that no small part of the patriotic response to the call for enlistment upon the part of the Canadians can be traced to the fund; it has benefited the soldier in the field, for its existence enables him to enjoy the peace of mind which comes from knowing that his dependents are looked after while he is away; it benefits the family who receives the grant, not only from the point of view of intensive welfare work, but also because the beneficiaries are made to realize that the Canadian Patriotic Fund grant is not a charity but represents the amount which is justly theirs while the breadwinner is fighting for his country; it benefits those who contribute, for it enables them to feel that even though they can not be on the firing line they are performing a service to their country; and lastly, it benefits those who are engaged in the the administration by permitting them to enjoy the elevating influence attached to this form of social-service work.

As already indicated, benefits may be paid after the discharge of a soldier from the service, this assistance being rendered in the form of (a) pension payments to the soldier with an allowance for children, and (b) payments to the family during the reeducation of an incapacitated soldier—that is, while he is in some home or sanitarium receiving medical treatment and being restored to a condition of health which will permit of his becoming a useful member of society. These homes are operated under the supervision of the Military Hospitals Commission, and while in them the soldier receives his regular military pay and his family still continues to enjoy the assigned pay, the separation allowance, and the patriotic-fund assistance, if any. An article describing the organization of the Military Hospitals Commission, the activities of the hospitals and homes, the allowances and benefits received by soldiers committed to them, appears in the June issue of the MONTHLY REVIEW (pp. 867-874) under the title "Vocational training for disabled soldiers in

Canada." Under the schedule there noted a soldier undergoing vocational training, with a wife and six children, might receive monthly \$55 (minus whatever pension he was receiving) and in addition thereto \$8 for spending money and \$30 for maintenance allowance.

For the purpose of pension payments, soldiers are placed in six classes according to the degree of disability sustained. Six classes have been found to be inadequate. Appendix XII of the bulletin gives a new scale of 10 classes shortly to be adopted. The pension received by the rank and file for total disability is \$480 a year and ranges up to \$2,700 a year payable to brigadier generals. In certain cases a further yearly allowance is made.

The determination of the degree of disability is of great importance. The full table of disabilities in percentages of total disability is shown in Appendix XIII of the bulletin. Below is given the ratings of some of the disabilities:

	Per cent.
Epilepsy, fits occurring several times per day-----	100
Epilepsy, fits occurring every 2 or 3 weeks-----	50
Loss of 1 eye-----	33
Loss of tongue-----	60
Loss of 1 hand-----	70
Loss of 1 arm above elbow-----	75
Loss of 1 foot-----	60
Loss of both feet-----	100

Loss of life is of course considered as total disability, 100 per cent, and in that case the following regulation applies:

If a member of the forces has been killed or has died as the result of injuries received, or disease contracted or aggravated while on active service, the widow, until remarriage, shall be entitled to the equivalent of the pension in class 2 (80 per cent and less than 100 per cent), and also be entitled to draw the allowance for children. On the remarriage of the widow her pension shall cease, but she shall be entitled to a gratuity of an amount equivalent to one year's pension.

The amounts payable to various dependents are set forth in full in Appendix XIV, which gives the regulations promulgated by the Board of Pension Commissions regarding pensions to the Canadian Expeditionary Force.

In defining the principle embodied in the plan so fully described the author declares that—

no good reason exists for failure to recognize the fact that the soldier in the trenches and the civilian worker in a munition plant are on an equality when the question of protection to their dependents is at issue. If we provide that in the event of the death or injury of the munition worker his family shall receive benefits for a certain period, ought we to deny to the family of a soldier a similar measure of protection? There is an equal necessity for placing the compensation benefits or "pensions" of the soldier upon a scientific basis as in the case of the compensation laws applicable to the industrial worker. Every feeling of gratitude and humanity dictates that a satisfactory—even liberal—

allowance shall be made to the disabled soldier and his dependents, but sentiment and generosity must be considered when the plan is formulated and not when individual cases are passed upon. The latter course must inevitably lead to discrimination, unequal and unfair awards.

INDUSTRIAL EFFICIENCY AND FATIGUE IN BRITISH MUNITION FACTORIES.

The British Health of Munition Workers Committee issued, under date of February, 1917, an interim report on "Industrial efficiency and fatigue."¹ This report contains two parts, Part I comprising industrial and statistical studies and Part II medical studies. In Part I are reprinted Memorandum No. 7, "Industrial fatigue and its causes," and Memorandum No. 12, "Statistical information concerning output in relation to hours of work," previously published by the committee. In addition, a group of special studies are presented in Part I, entitled, respectively, "Comparative efficiencies of daywork and nightwork," "The causes and conditions of lost time," and "Incentives to work with special reference to wages." Part II contains a "Report on the health and physical condition of male munition workers," and an "Inquiry into the health of women engaged in munition factories."

This bureau now has in preparation a bulletin containing a full reprint of all the studies referred to except memoranda Nos. 7 and 12, which were published in full in Bulletin No. 221.

Regarding the comparative efficiencies of daywork and nightwork in munition factories, the committee points out that while the case against nightwork was considered to be sufficiently established, the data collected are in all cases prejudicial to nightwork. It would appear, then, that nightwork, although necessary in the present crisis, is undesirable. However, the committee considers that the extensive data gathered in its investigations on this subject provide material upon which certain conclusions, having reference to relatively light repetition work, may be based as to the result upon output to be anticipated from this scheme of nightwork. These conclusions are here quoted from the report:

Women.—(1) In monotonous processes which call for little physical effort, such as those concerned with cartridge making, discontinuous nightwork of women gives an output which rarely falls much more than 10 per cent below and usually approximates closely to that obtained by day.

(2) Continuous nightwork is productive of definitely less output than is the discontinuous system; and the committee have failed to obtain evidence that the output of the continuous day shift balances this inferiority.

(3) (a) The timekeeping of girls and of women of 19 years of age and upward, working for alternate weeks of day and night shifts, is even better maintained than when they work on permanent day shifts.

¹ Great Britain. Ministry of Munitions, Health of Munition Workers Committee, Interim report. Industrial efficiency and fatigue. London, 1917. 121 pp. Price, 1s. 3d.

(b) Timekeeping of girls of 14 to 18 is practically the same whether they work on permanent day shifts or on day and night shifts.

The committee, basing their opinion upon these conclusions, consider it undesirable to adopt for women continuous night shifts in any factory not at present so working or not yet open, and suggest that wherever practicable this system should be discontinued.

The committee believe that this inferiority of the continuous nightworker may ultimately be referred to a failure to secure proper rest and sleep in the daytime. Women on continuous nightwork are likely to perform domestic duties which, when they work alternately in the two shifts, is impracticable; and this extra domestic strain may account for the inferior results of their industrial activities. The committee has, indeed, some evidence of women employed in permanent night shifts who still carry on their ordinary daytime avocations, but it is not sufficiently extensive (statistically) to be offered as a proof of the suggestion just made.

Men.—The conclusions arrived at with respect to women are true, with slight modifications, for men.

(1) There is no significant difference between the rate of output in night and day shifts managed on the discontinuous system.

(2) With men, as well as with women, the discontinuous system is preferable to continuous night work.

There is no reason to think that the nightly output need be much, if at all, inferior to the output by day in the case of a discontinuous system, and there is evidence that the timekeeping by night is rather better than by day. The contrast between permanent night shifts and permanent day shifts is, however, less striking than in the case of women. On the whole, it appears that the rate of output may be less and the loss of time greater than in the discontinuous system. This result is what might be expected if the surmise regarding the cause of the inferiority seen among women were correct. Men do not naturally take so much part in domestic work as women, and the temptation to burn the candle at both ends is, from this point of view, smaller. On the other hand, the incitement to devote the time which should be given to sleep to amusement is certainly as intense among men as among women, so that some inferiority might be anticipated.

The principal conclusion seems to be, therefore, that, equally with women, men can more profitably be organized under the discontinuous than under the continuous system of night work.

With reference to the matter of causes and conditions of lost time, grouped (1) as causes uncontrollable and including necessity of employing persons of inferior physique or irregular habits, bad weather, lack of housing and transport facilities, sickness and accident, etc., and (2) causes mainly controllable, including drink, indifference, overtime work, discontent with conditions of work, etc., the report discusses the question of how far lost time is attributable to sickness, considers the relation of lost time to overtime, giving figures that show the large extent to which hours gained by overtime may be counterbalanced by lost time, and suggests the uneconomical and unprofitable results following the employment of workers before breakfast.

How considerable a proportion of the time gained by extraordinary hours may be lost in normal hours even in a well-managed factory in

which the good will of the employees is undisputed, is illustrated by citing the engineering departments of a firm engaged on heavy work, where the normal day-shift week is 53 hours and the night-shift week is 60 hours, in which 53 per cent of the time gained by working overtime, in a given four weeks in May, 1916, was lost by bad time-keeping and sickness, while 59.6 per cent was lost in a given two weeks in June, 1916. It is stated that the high percentage of loss is mainly attributable to a very high sickness rate, itself the result of long hours on heavy work since the beginning of the war.

"A mere comparison of hours gained by overtime and normal hours lost is worthless if unaccompanied by other figures; since if little overtime be worked it may be more than counterbalanced by a very moderate loss of normal time, not in any way due to the overtime work."

The report suggests in this connection that the very long hours worked in many factories during the past two years have, perhaps, been necessary, but that the necessity has been imposed upon and is deplored by employers and managers who have noted the decreasing briskness and resilience of the workers. The strain seems to have had its effect, not only upon operatives, but still more upon officials and upon foremen, who have broken down in considerable numbers. Many of the workers welcome long hours because of the extra pay, and one factory is mentioned in which the men complained in consequence of the fact that overtime had been kept at a low point. However, it is added that the sickness rate in that factory was correspondingly low, and "there can be no doubt that for the average man high wages earned by long hours are too dearly earned."

In four selected cases where timekeeping was reasonably good and records were carefully made, the unavoidable loss, chiefly due to sickness, was more than half the total loss.

For the week ending February 4, 1916 (a period in which lost time was likely to be considerable, and the sickness rate especially likely to be high), of 77 firms returning their time lost as not more than 6 per cent of possible time, 56 attribute at least half to sickness (including accidents), and 21 attribute less than half of it to this cause; of 41 firms returning a percentage over 6 and not more than 10, 24 attribute at least half to sickness, and 17 attribute less; and of 25 firms whose employees lost more than 10 per cent of possible time, only 7 attribute more, and 18 attribute less, than half the loss to sickness.

In one factory working 53 hours per week and requiring work before breakfast, 30.9 per cent of the men lost 5 per cent of the possible normal hours, while in another factory, also working 53 hours per week but requiring no work before breakfast, only 1 per cent of the men lost 2.38 per cent of the possible normal hours, both avoidably and on account of sickness. The following is a summary of the more important conclusions reached by the committee:

The proportion of lost time that is due to sickness and other unavoidable causes is, as a rule, greatly underestimated in factories' records, and the proportion due to slackness consequently overestimated.

Long hours, much overtime, and especially Sunday labor, have a pernicious effect upon health, particularly in heavy trades.

Except where hours have been very long relatively to the class of work, sickness does not appear to have increased in factories generally since the war, despite the withdrawal of many of the robust men; and the absence of such increase is to be ascribed to good employment and high wages.

Work before breakfast gives inferior output, lowers health, and leads to great loss of time as the first short spell is so frequently missed. Experience shows that in certain descriptions of work the early quarter has been advantageously abolished both prior to and even during the course of the war, and under similar conditions it ought not to be instituted in new factories opened during the further course of the war.

In its report on incentives to work, with special reference to wages, the committee states that it constantly found that the health, that is, the absence of sickness, physical and mental, and the efficiency of the workers are influenced by the earnings, and that output, which has been closely investigated as an indication of fatigue, may be influenced by the wage system in force. "Other influences may arise to stimulate the inclination for work, pride in craftsmanship and in work well done, personal rivalry to outstrip a fellow worker or hope of promotion," but in this report the committee aims to show to what extent it has found the efficiency of workers affected by the method of remuneration adopted; that is, payment for the time during which work is done (by the hour, the day, or night), or for the work done (by the piece), or as a minimum sum up to the completion of a certain task, beyond which piece rates are paid.

Generally speaking, it was found that payment by time alone, which is unavoidable for a large proportion of the work, although it has the advantage of removing from the operative an element of uncertainty concerning his earnings, has no direct influence in stimulating the inclination to work, and that under this system some workers may be expected to keep well within their powers, while others, whose inclination to work is greater, may feel it a grievance that extra exertion brings with it no extra return.

On the other hand, piece rates, it is stated, have been introduced as a result of a desire to bring a direct stimulus to bear upon the natural inclination to work, "and the manufacture of munitions of war, which is so largely constant repetition work applied to a great number of minutely subdivided processes, lends itself particularly to this form of payment." A table is included giving a comparison of time wages and piece rates, showing that 17 girls drilling fuses and working on the piece-rate basis in one week increased their output by 24 per cent on the day shift and by 40 per cent on the night shift over their output when working on a time-wage basis; while

three girls retapping fuses by hand increased their output 28 per cent on the day shift and 48 per cent on the night shift over their output when working on a time-wage basis.

The committee mentions, as instances of failures of wage systems to act as incentives, the lack of desire to earn more, lack of opportunity to spend, lack of adjustment of wage systems, and the additional fact that piece rates may cause overspeeding.

Certain definite influences appear to be important when arranging incentives intended to stimulate the natural inclination to work, and these the committee summarizes as follows:

A healthy environment in the factory and in the home is the first necessity in order to obtain a healthy population of wage earners to whom a wage scheme may appeal as an incentive to work.

Under conditions of repetition work, especially if it be monotonous, piece rates may be expected to give a greater output than time wages.

The rise and fall of wages (paid on a well-planned piece rate) earned by individual workers is a valuable indication of health and efficiency.

A wage scheme, the operation of which can not be easily understood by the wage earners, or, if understood, appears to them inequitable, fails as an incentive.

A wage scheme which is badly adjusted may lead directly to limitation of output.

A scale of wages which renders it possible for the wage earners to obtain too easily all the money which their social aspirations demand fails to provide an adequate incentive.

Hours of labor, which give but little chance of spending the wages earned, diminish the incentive to earn more money.

Workers, especially those newly introduced to industrial life, require protection against their own eagerness.

In connection with the medical studies 1,543 men, 1,509 boys, and 1,326 women and girls were examined between December, 1915, and August, 1916. Although evidence was found of strain and fatigue, the report states that at the time of the examination "the medical examiners undoubtedly found less ill health than they anticipated," probably due, it is suggested, to patriotism and to better food and clothing obtained as the result of the high wages now generally earned. However, a continuous process of selection of the strongest workers has hitherto been in operation, and this must be gradually restricted as the demands on labor increase, with the probable result that serious breakdowns in health may occur in the future. The report describes the factory and social environment of the workers, and information is given as to the conditions under which workers lived and labored during the period covered by the investigation, including such matters as the nature of the food eaten, housing and transit, the amount of sleep obtained by workers when on day shift and night shift, respectively, and the employment of married women.

With reference to men, the medical examiner found no one defect pointing conclusively to overwork or strain, although many of the defects taken collectively indicated severe strain, and he makes the suggestion that sleepiness on the night shift, headache, footache, and muscular pains, coupled with nervous symptoms, are probably the most common signs of overwork. Among 1,543 men the time lost during 12 months from all causes was 12,964 days, of which 20 per cent was due to accidents and 80 per cent to sickness. Among the boys, 53 per cent of the lost time was due to illness and 47 per cent to accidents. The medical examination of these men and boys led the examiner to recommend—

(a) Reduction of excessive hours, especially when bad transit makes a substantial addition to the effective working day, and in the case of boys; (b) provision and improvement of canteens; (c) provision of adequate washing accommodation in all works, with baths for workers in the hot and heavy trades; (d) improvements in first-aid equipment; (e) hygienic qualifications of welfare workers.

The result of the examination of women and girls emphasized the importance of adequate provision for the health and comfort of the workers.

It is probable that as the work continues over a long period and the novelty wears off, the strain will become more serious, the standard of physical efficiency will be lowered, and the output consequently decreased unless care is taken to avoid unnecessary burdens and to secure such amelioration as is practicable. The provision of well-managed canteens, for example, is particularly important as the cost of food increases; suitable lodgings or hostels are more needed as factories enlarge and workers are encouraged to come from a distance; hours of work should be restricted within reasonable limits, with sufficient pause at the week-end and with periodical holidays; satisfactory arrangements for transit are essential if unnecessary fatigue and illness are to be avoided, especially during the winter months; properly staffed and equipped ambulance stations and rest rooms are needed, where girls temporarily incapacitated by illness or accident may obtain treatment or advice. A welfare supervisor, whose duty it is to care for the physical well-being of all women employed, should always be a member of the staff employed by the firm. The provision of day nurseries may sometimes be necessary.

If proper care and forethought are exercised there seems no reason why women and girls, suitably selected and supervised, and working under appropriate conditions, should not take their place in munition factories and carry out many operations hitherto considered fit only for men, without permanent detriment to their future health.

MUNITIONS TRIBUNALS IN GREAT BRITAIN.

When the Munitions of War Act of 1915 was before Parliament as a bill, questions arose as to the judicial tribunals before which prosecutions for offenses under the act should be brought. This was a matter of very great importance, particularly to the worker. The munitions act revolutionized the old practices and customs regarding such vital matters as wages, trade-union rules, even the free transfer of the

worker from one place to another. It was therefore to be anticipated that the application of the act in practice would lead to many uncertainties and disputes.

It was originally intended that these prosecutions should take place before the ordinary courts of summary jurisdiction, but finally it was decided that it was desirable to set up new tribunals of a special character to deal with these prosecutions, and also with applications by workmen for "leaving" certificates.¹

It was decided that each munitions tribunal should consist of an impartial chairman appointed by the Minister of Munitions, assisted by representatives of employers and workmen drawn in equal numbers from panels formed for the purpose. This arrangement is analogous to that adopted in constituting the courts of referees under the National Insurance Act of 1911.

It was further decided to constitute two classes of munitions tribunals: (1) General munitions tribunals to deal with prosecutions for the more serious offenses, with power to imprison for nonpayment of fines; and (2) local munitions tribunals to deal with minor offenses and with applications by workmen for leaving certificates, these local tribunals not to have the power to imprison for nonpayment of fines.

These arrangements were embodied in section 15 of the Munitions of War Act of 1915 (July 2). Power to make rules for regulating the munitions tribunals was given to a secretary of state so far as related to offenses and to the Minister of Munitions so far as related to other matters. The Admiralty was substituted for the Minister of Munitions as the authority to appoint and choose members of a munitions tribunal to deal with offenses by persons employed in any docks declared to be controlled establishments by the Admiralty.

For the purposes of the munitions tribunals the United Kingdom was divided into 10 divisions—7 in England, 1 in Scotland, and 2 in Ireland. For each of these divisions a general munitions tribunal was set up. Each division was subdivided into a number of districts, for each of which a local munitions tribunal was constituted.

The rules for constituting and regulating the munitions tribunals were prepared as soon as possible and came into force as Provisional Rules on the 12th of July, 1915.² Similar rules were prepared at the

¹ In order to promote continuity of employment the act forbids employers in certain establishments from employing a workman who has within six weeks been engaged on munitions work, unless such workman has been granted a certificate by his former employer that the workman is free to accept other employment, or a certificate to that effect granted by a munitions tribunal. Munitions of War Act, 1915, section 7, amending act, 1916, section 5.

² These Provisional Rules were published in Bulletin No. 221 of the United States Bureau of Labor Statistics under date of April, 1917. These rules were no longer in force at that date, having been suspended in 1916, by Statutory Rules and Orders No. 123 (Feb. 24, 1916). The error was due to slowness in receiving published documents from European countries at the present time.

same time in consultation with the Scottish and Irish offices for Scotland and Ireland. The Scottish and Irish rules contained slight modifications necessary to adapt them to Scottish and Irish law.

Substantially the same form of organization applied to both general and local tribunals. In either case the court consists of a chairman sitting with two assessors, one drawn from a panel of employers or their representatives, and the other from a panel of workmen or their representatives.

The procedure laid down by the rules, though generally analogous to that of courts of summary jurisdiction, presented certain important differences and novelties, of which the following examples may be given:

1. No party to any proceedings before a local munitions tribunal was allowed to be represented by counsel or solicitor.

2. The rules provided that complaints could only be made by a person aggrieved or by or on behalf of the Minister of Munitions. In the Munitions Tribunals rules of 1916 this limitation was removed.

3. The procedure on complaint by a workman that a leaving certificate had been unreasonably withheld by his employer was of a less formal nature than that in prosecution cases and evidence on the hearing of these complaints was not usually taken on oath.

4. Any person upon whom a fine of £20 (\$97.33) or more was imposed by a general munitions tribunal was given a right to appeal to a court of quarter sessions.

Immediately after the passing of the munitions act in 1916 chairmen of general and local munitions tribunals throughout the United Kingdom were appointed by the minister of munitions. Most of these were barristers or solicitors. In the case of the local tribunals the chairmen of the courts of references appointed under the National Insurance Act were invited to serve as chairmen of the tribunals. Panels of workmen's assessors and employers' assessors were appointed, from which assessors could be drawn to sit with the chairmen of the general munitions tribunals. The existing panels under the National Insurance Act, 1911, were constituted panels from which assessors could be drawn to sit with chairmen of local munitions tribunals. Clerks were also appointed for each tribunal, these being chosen as far as possible from men who had had experience of the working of the summary jurisdiction acts as clerks to justices or otherwise.

One of the main difficulties connected with the procedure of the munitions tribunals was that there was great danger of different decisions being given on the same point by different tribunals. In fact, as time developed, this happened not infrequently. The appeal to quarter sessions given by the rules proved ineffective, no appeal

ever being made. It was therefore strongly urged that when the amending act was brought in an appeal tribunal should be set up, and in the meantime with a view to obtaining as complete uniformity as possible in the decisions of the tribunals the suggestion was made that opinions given by the treasury solicitor and the law officers on important points of law and practice under the principal act should be printed and circulated to the chairmen of the tribunals. The suggestion was approved and the opinions in question were printed and circulated. It is considered that this step was of very great importance and that it prevented serious confusion arising from a number of conflicting decisions.

The Munitions of War (Amendment) Act, which came into force on the 27th of January, 1916, together with the new rules for munitions tribunals,¹ which came into force on the 24th of February, 1916, introduced a number of changes in the procedure and working of the munitions tribunals. The principal changes were as follows:

1. A new appeal tribunal was set up. This matter is more fully dealt with below.

2. Provision was made that the chairman of a munitions tribunal should consult with his assessors before giving a decision and should on questions of fact give effect to the opinion of the assessors.

3. It was arranged that a female assessor should sit with the tribunal in all cases where female workers were affected.

4. The power of the general munitions tribunals to imprison for nonpayment of fines was taken away. There had been much opposition to the original conferring of this power to imprison for nonpayment of fines on the ground that it would cause irritation among the workmen and their trade-unions without any corresponding benefit. This power of imprisonment seems to have been exercised on only one occasion.

5. The extent of the powers and duties of the munitions tribunals regarding applications by workmen for leaving certificates was greatly enlarged and extended and power was conferred upon them to grant compensation in certain cases where a certificate had been refused by the employer or where the employer had failed to give to the workman either a week's notice or wages in lieu of notice.

6. Provision was made that any notice required to be served by the rules might be sent by registered post and if so sent should be deemed to have been duly served.

7. It was provided that the chairman of a munitions tribunal should keep a note of the evidence given in proceedings before the tribunal. This provision was desirable in any case and was rendered necessary by the provisions of the appeals rules mentioned below.

¹ Munitions Tribunals Statutory Rules and Orders No. 123 (Feb. 24, 1916), added to by Order No. 649 (Sept. 2, 1916).

8. Power was given to the munitions tribunals to award costs against any person commencing frivolous or vexatious proceedings.

9. Provision was made that in cases of applications by workmen for leaving certificates or for compensation for dismissal without a week's notice or wages in lieu of notice, a workman might instead of attending the hearing send to the chairman of the tribunal a statement in writing of the facts of the case, and that the employer might also do this if he did not wish to attend the hearing. The rules provided that these statements if sent should be considered by the tribunal.

As regards appeals from the decision of the munitions tribunals, this had been a subject under serious consideration for some time before the amending act was passed. It was ultimately decided that the appeal tribunal in England should be a judge of the high court selected by the lord chancellor; in Scotland, a judge of the court of sessions selected by the lord president of the court of sessions; and in Ireland, a judge of the high court selected by the lord chancellor for Ireland. Statutory effect was given to these decisions by section 18 (3) of the amending act.

The most important provisions of the appeals rules as applicable to England and Wales¹ are briefly as follows:

1. (a) A person convicted of an offense or against whom an order is made or to whom a leaving certificate is refused, and in all cases the minister of munitions, may appeal to the judge without leave on any ground involving a question of law alone.

(b) With the leave of the judge or with the written permission of the chairman of the munitions tribunal he may appeal on any ground involving a question of mixed law and fact.

(c) The other party to the proceeding may appeal with the leave of the judge or with the written permission of the chairman on any ground involving a question of law or a question of mixed law and fact.

2. Notice of appeal or of application for leave to appeal is to be sent to the judge within seven days of the decision appealed against. This time may be extended by the judge. Notice of intention to appeal is given to the clerk of the munitions tribunal whose decision is appealed against.

3. An appeals officer is appointed to receive and deal with all documents, notices, etc., connected with appeals.

4. On receiving notices of appeal, the appeals officer, when directed by the judge to do so, sends a copy to the chairman of the tribunal whose decision is appealed against, and the chairman thereupon furnishes certain documents to the appeals officer, including a

¹ Order No. 137 (Mar. 2, 1916).

report in triplicate on the evidence in the case, the facts found by the tribunal, and the grounds of the decision.

5. Appeals may be summarily dismissed by the judge or may be abandoned by the parties.

When an appeal is to proceed the appeals officer sends a copy of the notice of appeal to the respondent and to the Minister of Munitions, and gives due notice of the time and place of hearing.

6. The minister may with the leave of the judge appear and be heard on any appeal and may also at any stage of an appeal substitute himself for either party to the proceedings by giving notice in writing to the appeals officer and to both parties.

7. Power is given to the judge, among other things, to sit with two or some other even number of assessors drawn from the employers' panel and workmen's panel, to order any witnesses who would have been compellable witnesses before the munitions tribunal to attend and be examined on oath before him, and to exercise any powers exercisable by any judge of the high court.

8. In addition to the power to set aside the decision of the munitions tribunal, the judge may order a rehearing of the case before the munitions tribunal, and may direct that his decision shall not invalidate any leaving certificate issued or ordered to be issued by a munitions tribunal. Orders made by the judge are enforced as if they had been made by a munitions tribunal.

9. Costs are in the absolute discretion of the judge.

10. The decision of the judge is final and binding on all munitions tribunals in England and Wales.

In order that the minister should be kept informed of the decisions of the munitions tribunals and, in proper case, be able to exercise the power of appeal conferred upon him by the amendment act, it was decided to appoint, as reports officers, men possessing legal qualifications and experience to attend sittings of the tribunals and also to appoint a chief reports officer at the Ministry of Munitions to carry out the duties hereafter referred to.

The duty assigned to the reports officers was to call attention, first, to decisions involving questions of law or of mixed law and fact doubtful in themselves or conflicting with decisions of other tribunals or those of the high court given on appeal; and, secondly, to any decision, whether involving a point of law or not, which would appear to militate against the successful working of the munitions acts. The reports on such cases sent by reports officers, as well as the notes of evidence and decisions of cases sent by the chairmen of tribunals, enabled the department to be kept informed as to the general working of the tribunals and the trend of their decisions.

By means of the exercise of the right of appeal given to the Minister of Munitions, it was intended to secure as far as possible uni-

formity of decisions and practice in all the tribunals. In cases where decisions did not accord with established and recognized principles, but were of insufficient importance to justify an appeal, the ministry, through the chairmen of tribunals, assisted in bringing about the desired uniformity.

The right of appeal by the ministry of munitions was frequently exercised and important decisions were rendered upon the interpretation of, and the procedure to be observed by, tribunals under the munitions acts.

In many cases the minister either on his own initiative or upon the request of the judge was represented by counsel at the hearing of appeals. Generally speaking, the cases in which the minister so appeared were those in which questions of substantial and far-reaching importance to munitions works and workers were involved or those which related to the administration of the munitions acts by the ministry or other Government departments.

In order that the judgments of the courts of appeal for munitions cases should be accurately recorded and made accessible to Government departments, to the chairmen of tribunals, and to others interested in the working of the munitions acts, arrangements were made for the publication of cases in a convenient form. As each part appeared it was circulated to chairmen of tribunals, reports officers, and generally to the Government departments immediately concerned with the munitions acts. These reports were found of great value in securing uniformity of decisions between the many different tribunals and formed a ready and convenient reference for the solution of the many questions put to the department upon the interpretation of the munitions acts.

NEW PLAN FOR LABOR SUBSTITUTION IN MUNITION FACTORIES OF GREAT BRITAIN.

[Reprinted from the British Board of Trade Labor Gazette for May, 1917, p. 161.]

PARTICULARS OF NEW APPEAL FOR VOLUNTEERS.

An appeal for volunteers on a new plan has been set on foot by the Director General of National Service.

Under the old scheme a general appeal was made to all and sundry, and the volunteer was invited to offer his services for any work to which he might be sent. The essence of the new scheme is that, instead of this general appeal, a direct and specific appeal is being addressed to the various trades to prepare and carry through schemes of substitution by means of joint committees of employers and work-people in each organized trade; or, in the less well-organized trades, through the local national service committees referred to below.

The substitutes so obtained will be called "substitution" volunteers. It does not matter whether they have already offered their services as "national service" volunteers or not. "Substitution" volunteers will not be required to sign Form N. S. V. 1. All volunteers are now allocated to their work by the substitution officers of the national service department, and not through the employment exchanges.

A "substitution" volunteer will not be asked to leave his employment except to take up a definite job on work of national importance, on terms which will be clearly notified to him. If the terms are unacceptable to him, he will be free to refuse the offer without going before any appeal court. He will either take the place of a man of military age and fitness who has been called up to join the colors, or he will reinforce the labor supply in industries of special national importance for war purposes. In either case he will have the satisfaction of feeling that he is engaged in direct war work as truly as the men who are actually with the colors. The terms of employment as regards wages are set out in the statement appended hereto; and it will be seen that the volunteer is not now asked to make any pecuniary sacrifice by transferring his services from private to national work.

Some of the trades which have been or will be approached under the new scheme are well organized, with central and local associations of employers and workpeople; such are the building trades, the printing and bookbinding trades, the woodworking and furnishing trades, the pottery trades. These four trades have been dealt with by direct negotiation with the associations concerned, and other well-organized trades are being dealt with in the same way. Central joint committees have already been or will be set up in each trade by the representatives of the trades themselves, and these committees will be assisted by joint local committees similarly constituted.

Many other trades, however, are less well organized or are organized on local rather than national lines, and there are, in addition, large groups of men in nonindustrial employment, such as clerks, shopkeepers, and shop assistants, warehousemen, male domestic servants (indoor and outdoor), and men who are unoccupied. It is therefore proposed to have a local national service committee in every urban area to deal with these unorganized trades and miscellaneous classes. These committees will include both employers and employed.

Large numbers of men of military age and fitness, who are urgently required in the Army, are at present employed in munition works and in other work of national importance, but they can only be released if a sufficient number of suitable substitutes are forthcoming. Employers' associations and trade-unions can assist in obtaining these substitutes in one of two ways. If the trade is so well organized that it could most usefully cooperate with the national

service department through a joint trade committee they are invited to communicate with the director of the general trades section of the department, St. Ermins, Westminster, S. W. 1. In other cases they are asked to communicate without delay with the secretary to the local national service committee, or, if that officer has not yet been appointed, with the town clerk or the clerk to the urban district council, as the case may be.

TERMS OF EMPLOYMENT OF "SUBSTITUTION" VOLUNTEERS.

I. *Transfer to another occupation whether in the same or another district.*—A volunteer, on transfer to another occupation, either in the same district or in another district, shall be paid the time rate per hour of the occupation from which he has been transferred. When in any occupation from which the volunteer is to be transferred there is no recognized time rate a rate shall be fixed by the director general of national service after consultation with the parties concerned.

Should the rate specified in paragraph 1 be less than the standard time rate paid in the occupation to which the volunteer has been transferred, the rate of the volunteer shall, by equal weekly increments over a period of one month, be raised to such standard time rate. The time rate so provided shall be the time rate of the volunteer so long as he is engaged on time work proper.

When the volunteer is transferred to an occupation other than that in which he has been ordinarily employed he shall be engaged primarily in simple operations, and as he qualifies he shall be promoted to the higher grades of the occupation or to another occupation. The probationary period of four weeks shall be observed only on transfer to a new occupation and not on each promotion.

Subject to the guaranty provided in paragraph 1, the rates of wages and working conditions for volunteers shall be those customary for the same work in the same factory.

II. *Transfer to other employment in the same occupation in another district.*—A volunteer on transfer to other employment in the same occupation in another district shall be paid his former time rate or the time rate of the district to which he is transferred, whichever is the higher.

III. *Transfer to other employment in the same occupation in the same district.*—A volunteer on transfer to other employment in the same occupation in the same district shall receive the rate applicable to the district.

IV. *Subsistence and traveling time.*—Subsistence allowance and traveling time shall be paid in accordance with the following scheme in the cases of transfers I and II, above.

The workman will receive over and above his wages the following allowances:

- (a) If brought from a distance beyond that which he can reasonably travel daily, railway fare at the commencement and completion of the work for which transferred; and, where necessary, subsistence allowance at the rate of 2s. 6d. [60.8 cents] per day for seven days per week.
- (b) If within daily traveling distance (exceeding half an hour each day) the value of the workmen's tickets and one hour's traveling time per day at the rate of time and a half.
- (c) If within daily traveling distance (not exceeding half an hour) the cost of workmen's tickets, or, if they are not available, third-class tickets.

Subsistence and traveling allowance will be paid by the firm employing the workman, with the wages.

V. *Out-of-work allowances.*—If, after being called up and employed, a volunteer is discharged by his employer after completing the work allotted to him, and no further work is available for him, he may be entitled to receive, whilst no work is available for him, an out-of-work allowance at the rate of 3s. 6d. [85.2 cents] per day (including Sundays) for a period not exceeding four weeks, the first payment to be due one week after the commencement of unemployment.

Any question which arises as to the interpretation of the foregoing provisions shall be determined by the director general of national service.

WOMEN RECRUITS FOR WORK ON FARMS IN GREAT BRITAIN.¹

In Great Britain the services of women on land will be more imperatively needed than ever owing to the withdrawal at the end of May of the 40,000 soldiers lent by the Army to do the spring work in the fields. The new Women's Land Army of the National Service is being organized to meet this need and the work is being greatly helped by the existence of a small nucleus of trained women, or at least of women with some experience on the land, known as the Women's National Land Service Corps. In February, 1916, conditions having become serious and promising to be more so owing to continual drain of men off the land, the Women's Farm and Garden Union, the only association which dealt with women's outdoor work before the war, sent a deputation to the board of agriculture, with the result that in subsequent negotiations ground was allowed to the association for the training of women for land cultivation. This led to the immediate formation of the Women's National Land Service

¹ Christian Science Monitor, Boston, May 14 and June 7, 1917.

Corps with headquarters in upper Baker Street in London, which were lent for the purpose by Lord Portman.

About 2,000 women have joined the corps and have been placed on farms in various parts of the country. The recruiting of the right type of women for work on the land is essential to success, and since county committees dealt mainly with the enlistment of local resident women in country districts, it became the work of the corps to recruit suitable girls and women in the towns who could be sent to any district to supplement local labor. According to a statement of Mrs. Roland Wilkins, chairman of the corps, all the women enlisted in the corps have had a secondary education and have gone onto the land mostly from patriotic motives. The corps has not encouraged girls who had to live on their earnings to take up agricultural work because of the low rate of pay. Patriotic motives alone made it worth while to women to take up this hard work for such wages as would only provide them with the necessaries of life. It is for this reason that the chairman of the corps is not sanguine in the expectation of a large number of women continuing in agricultural professions at the close of the war.

The value of educated women in the work which the corps is doing has been very clearly shown. Many members of the corps in taking up work on a farm have after a short time been asked by the farmer to see if they could not get the village women to give a helping hand, and in many cases they have succeeded in organizing the women into whole-time or part-time gangs. Force of example and a little persuasion are doing wonders in breaking down prejudice and timidity at embarking on unaccustomed work. The farmers have thus found the value of women's aid and have been led to ask for their help. The corps has always dealt perfectly frankly with the farmers and has never led them to expect skilled labor where all they could be provided with was good but untrained material, which, at most, was no more experienced than a six weeks' course can provide.

As for the accommodation of the women, a cottage occupied by two or three women, which is the number generally sent out to work on a farm, is the arrangement preferred. They either cook their own meals or get a friend to live with them who will do the housework. Others live on the farm or take lodgings in the villages, but in the low-wage districts the amount earned barely covers the charge for board and lodging. In isolated districts the total lack of accommodation was often all that prevented farmers from applying for women laborers.

During the training of the women, which takes place on a number of farms lent for the purpose to the parent association, the Women's Farm and Garden Union, hotels are provided for the pupils by the

Land Service Corps, which are run by a superintendent, who not only is housekeeper but also supervises the carrying out of the work to which she sets the pupils on the farm daily. Many women who applied to the corps to be put in the way of work on the land are sent to the National Service Land Army Organization, and they in turn send some of their applicants to the Women's National Land Service Corps. The corps does not offer the advantages of full training and full traveling expenses and equipment, but, on the other hand, the women who become members of the corps do not engage themselves in quite the same way as the recruits of the Land Army of National Service.

The only agency which offers such facilities for training to women anxious to do their share in helping their country and to whom the out-of-door life appeals more than work in factory or office is the national service department of the board of agriculture. Once the decision to go on the land is reached the first step for the recruit to take is to go to the nearest post office, obtain the necessary form, and sign it. In due time a business-like summons arrives, naming place and date and requesting her to appear before a joint committee of the employment exchange and the district selection and location committee of the Women's War Agricultural Committee. A railway ticket to the place mentioned is also sent, and the future land worker eventually finds herself before the district selection and location committee. If she is accepted after the interview the committee decides whether she is sufficiently skilled to go straight to a farm as a paid worker or if she is suitable for a bursary—i. e., 15s. (\$3.65) a week—in which case she is allocated direct to the farm on which she will work, or it may be decided to send her for 4 weeks to a training school. After certain formalities a return railway ticket is given to the recruit and she is told to await further orders. If she is fit to work on the land the committee proceeds to act on the decision arrived at during the interview.

When a recruit is sent to a training school all particulars regarding her are first sent to the committee in the county town to which they have sent her instructions and a railway voucher. If the recruit's work is satisfactory arrangements are made to place her upon a farm as soon as she is ready, and whenever possible a place is obtained for her in the locality where she was trained. Whenever a recruit is placed at work the village registrar or a specially appointed welfare worker visits her, and if any difficulty arises the recruit has someone to whom to appeal.

The recruit is now a full-fledged war land worker, and if she should be dismissed from her employment through no fault of her own and communicates at once with her district representative, she

can if she wishes it be sent back immediately to the county town. If she then wishes to return to her home at her own expense she can do so only with the permission of the district representative

CHILD LABOR ON ENGLISH FARMS DURING THE WAR.¹

The various propositions which are now being made for the use of children in farm work lend interest to the English experience with farm labor of children. England is putting her all into this war, and if she has found, in spite of the increasing strain of the passing months, that children's welfare has been needlessly sacrificed, surely the testimony of her officials is timely and important for us.

England has been granting special exemptions from school attendance. Between the outbreak of the war and the 1st of May last year 28,000 children of school age had been excused from school for farm work. What do the English official records show about the need for these children's help and the effect upon them of their employment?

The granting or withholding of exemptions has been in the hands of the local education authorities, and their policy has not been uniform. Many of them in all sections of the country have consistently refused to excuse children from school. The farmers of these districts have clamored as loudly as others for child helpers, but it appears from available reports that they have managed without the children when the school authorities stood firm.

The board of education during the first year of the war advised the local authorities as follows: Exemptions should be granted only to individual children after personal investigation of each case; no general breakdown of the laws in any district was intended; the employment of children of school age should be regarded as an exceptional measure and should be allowed only where the authorities were satisfied that no other labor was available. The authorities were to ascertain that application had been made to the labor exchanges with an offer of adequate wages. In no case were the authorities to excuse children if older children past the age of compulsory attendance were available; the authority should secure particulars of the work, the wages offered, and the period for which the labor was required; the work should be light and suitable to the capacity of the child.

A year later the board of education urged a stiffening of these conditions. They laid special emphasis on the fact that the urgency

¹ United States Children's Bureau. *Children in War Time*: First article, Child labor on English farms (press material released Apr. 30, 1917).

of the need for the child's help might be tested by the amount of wages offered; also, they said, a register should be kept of children exempted, and exemptions should be reviewed at least once in three months to ascertain that the conditions under which they were granted still existed.

In spite of this, the latest report of the chief medical officer of the board of education says: "The board have already expressed their concern to local education authorities at the large number of exemptions which have been granted far too freely and without sufficiently careful ascertainment that the conditions of exemption prescribed by the Government were fulfilled."

The Board of Trade Labor Gazette speaks of various other ways in which the shortage of men for farm labor has been met. Older children have been employed. Women have volunteered for farm work. Machinery has been increasingly used.

The Labor Gazette refers also to the low wages offered by the farmers. And in the parliamentary debates on child labor in agriculture the farmer's liking for a boy who will work for sixpence (12.2 cents) a day is given by some members as an important reason for the demand for child labor. Unofficially it is stated that in those parts of the country where rural wages are highest the least use has been made of children.

That the best interests of the children themselves have been sacrificed is recognized. As the chief medical officer of the board of education puts it in his last report: "To withdraw the child from school at an earlier age than that contemplated by the attendance by-laws is to arrest his education on the threshold of the years when he is probably just commencing to assimilate and consolidate the instruction he has received and is receiving at school. His introduction to labor at this time renders him liable to conditions of strain detrimental to his physical well-being."

CHILD LABOR IN WARRING COUNTRIES.¹

"The experience of war time has only demonstrated the necessity—technical, economic, and even physiological—of the labor laws enacted before the war. In our legislation secured in time of peace we shall find the conditions for a better and more intense production during the war."

These words of M. Albert Thomas, the French minister of munitions, illustrate perfectly the official attitude of both France and England after two years of emergency exemptions for war industries, according to the Children's Bureau of the United States Department

¹ United States Children's Bureau. *Children in War Time*: Second article, Child labor in warring countries (press material released May 26, 1917).

of Labor, which has just completed a brief review of all available reports on child labor in the warring countries.

In France and England earlier standards of hours are being restored, not only to protect the health of the workers but for the sheer sake of industrial efficiency, present and future. In Italy the Central Committee on Industrial Mobilization has taken steps in the same direction. In Russia, a year before the revolution, a movement was under way to raise the age limit for children in industry.

Canada, Australia, and New Zealand, in spite of the great armies of men they have sent to the front, have maintained their labor standards with little or no variation. Victoria has slightly increased the amount of overtime which may be permitted to women and children in special cases. On the other hand, Manitoba has reduced its legal overtime. No change whatever in restrictions on woman and child labor is reported from New Zealand.

The Children's Bureau sums up as follows the child-labor situation in France and England:

France, after almost two years of war-time exemptions by which children under 18 were allowed to work at night in special cases, restored the night-work prohibition for girls under 18 and provided that other nightworkers should be subject to medical supervision. The reason for this is indicated not only in the statement by M. Thomas, quoted above, but again in the following extract from the French official *Bulletin des Usines de Guerre* for July 31, 1916:

"With the continuance of the war it becomes necessary not only to find the best possible disposition of the forces available for our war industries but also to avoid every cause for exhaustion or weakening of the labor employed in our factories. There is a close relation between the conditions in which we place our workers and the improvement or the increase of our war products. For the very sake of the national defense we must conserve all their physical strength for the workers who are responsible for the manufacture of arms and for the output of our factories."

France has now under consideration an education bill which would in effect raise the standard of labor protection in war time. It was introduced in the Chamber of Deputies in March by M. Viviani and closely resembles a bill passed by the French Senate in June, 1916. This proposal to establish a system of continuation schools and to require part-time school attendance during working hours by all working children under 17 years of age has the indorsement of the Minister of Commerce and of business interests in all parts of the country.

A similar advance has been recommended in England by the departmental committee on education for juvenile employment after the war. This committee also advises an effective 14-year age limit for required school attendance without the exemptions permitted by the present law. Supplementary estimates for educational purposes have been presented to Parliament by the Government which look toward a strengthening of adolescent education along the lines suggested by the committee.

In England as early as 1915 some employers returned to regular labor standards. The British chief inspector of factories and workshops writes in May, 1916:

"The tendency grew as the year passed to substitute a system of shifts for the long day followed by overtime, and this is particularly reported of

munition factories in the Midlands and in Sheffield. * * * The number of days on which overtime was actually worked tended in many factories to decrease as experience grew of accumulating fatigue and lessened output. Probably for similar reasons Sunday labor also has tended latterly to decrease."

The reports of the British official committee on the health of munition workers on the waste involved in the long hours worked during the war are well known. They urge the restoring of restrictions and are full of such statements as the following:

"Even during the urgent claims of a war the problem must always be to obtain the maximum output from the individual worker which is compatible with the maintenance of his health. In war time the workmen will be willing, as they are showing in so many directions, to forego comfort and to work nearer to the margin of accumulating fatigue than in times of peace, but the country can not afford the extravagance of paying for work done during incapacity from fatigue just because so many hours are spent upon it or the further extravagance of urging armies of workers toward relative incapacity by neglect of physiological law.

"Conditions of work are accepted without question and without complaint which, immediately detrimental to output, would, if continued, be ultimately disastrous to health. It is for the nation to safeguard the devotion of its workers by its foresight and watchfulness lest irreparable harm be done to body and mind both in this generation and the next.

"Very young girls show almost immediate symptoms of lassitude, exhaustion, and impaired vitality under the influence of employment at night. A very similar impression was made by the appearance of large numbers of young boys who had been working at munitions for a long time on alternate night and day shifts."

In England the war exemptions to the factory laws have not included a lowering of the age limits for factory work. And the exemptions to the school-attendance laws permitted for agriculture and "light employment" are now bitterly regretted by the general education authority which has sanctioned them.

ADDITIONAL ALLOWANCES TO OLD-AGE PENSIONERS IN GREAT BRITAIN.¹

Desiring to recognize in a measure the hardships imposed upon old-age pensioners by reason of high prices of food and other economic conditions arising from the war, the British Government has developed a scheme for the award of additional allowances up to a maximum of 2s. 6d. (60.8 cents) for the period of the war only. This allowance is to be restricted to cases of special hardship, and the general object of the Government, as set forth in the scheme of the Lords Commissioners of His Majesty's Treasury,¹ is to provide a method whereby any old-age pensioner whose total means (including his pension) do not exceed 12s. 6d. (\$3.04) a week and are inadequate to maintain him, may have his means raised by an additional

¹ Great Britain. Old-age pensions: Copy of Treasury scheme for the award of additional allowances to old-age pensioners suffering special hardship owing to the war. London, 1916. 6 pp.

allowance to a sum not exceeding 13s. (\$3.16) a week, subject, however, to the maximum already mentioned. It is left to local pension committees or subcommittees to determine the amount of the allowance which should properly be awarded to a pensioner, having regard to his means and other considerations such as the cost of living in the particular locality, the means of any relatives with whom the pensioner may reside, etc. If the old-age pensioner is one of a married couple living together in the same house and the joint means of the couple (including the old-age pension or pensions) do not exceed 19s. 6d. (\$4.74) a week, it is provided that the means of the couple may be raised to a sum not exceeding £1 (\$4.87) a week by the grant of an additional allowance to the pensioner or pensioners, subject to the same limitation that the allowance to each pensioner shall not exceed 2s. 6d. (60.8 cents) a week. It is not proposed that any additional allowance should be paid to pensioners who, by reason of their other means exceeding 8s. (\$1.95) a week, are in receipt of less than the full old-age pension of 5s. (\$1.22) a week.

The additional allowance is not restricted to existing old-age pensioners; any future pensioner is permitted to make application for an additional allowance. No additional allowance shall be granted to an old-age pensioner who is an inmate of an infirmary or other poor law institution. Provision is made for reducing the allowance if, after it has been granted, the pensioner's means have increased, and for increasing the allowance if, after it has been granted, the pensioner's means have decreased.

THE LABOR SUPPLY OF FRANCE.

[Special report by C. W. A. Veditz, American commercial attaché, Paris, France, to the Bureau of Foreign and Domestic Commerce, U. S. Department of Commerce, Mar. 28, 1917.]

In connection with the parliamentary discussion of the bill presented by Senator Beranger, providing for the mobilization of the civil population, and for the organization of national labor in France and her colonies, an interesting report was presented on behalf of the committee on the economic organization of the country. The most valuable part of this report consists of the statistical information presented by the Minister of Commerce in reply to a series of questions prepared by a subcommittee of the above committee. These questions were as follows:

1. What are the civil labor requirements in the following branches of production: (a) For agriculture; (b) for transportation and re-
 victualing; (c) for public works—mines, waterfalls, electric power

plants, etc.; (*d*) for the services connected with munitions and manufactures for war purposes; (*e*) for auxiliary labor in the rear of the army zone?

2. What is the available supply of labor for the above categories, and, consequently, what are the deficits in each category?

3. What have been the actual results of the various governmental circulars which have made an appeal for the enrollment of volunteer laborers of both sexes? What method was employed? What results have been obtained?

4. Has the Government established a list giving the following data: (*a*) The industries, trades, and establishments indispensable for the revictualing of the population; (*b*) of the industries, trades, and establishments which are useful in the maintenance of our exchange by means of exportation; (*c*) of the industries, trades, and establishments which serve neither the national defense, nor the revictualing of the population, nor for export trade, and which absorb motive energy, raw materials, equipment, and labor which could be utilized for purposes of national defense or of revictualing the civil population?

In reply to the above questions, the minister of commerce sent detailed answers, based upon figures collected by the various branches of the National Government, and prepared primarily for the interministerial conference on the labor situation in France. The information thus gathered applies to the situation found to exist on February 1, 1917.

Answers to the first question.

(*a*) The labor needs of agriculture have been estimated as follows:

For the work carried on during the spring months	200,000 laborers
During the hay-making period	300,000 laborers
During the harvesting season	330,000 laborers
During the threshing period	270,000 laborers
During the vintage season	230,000 laborers
During the period of autumn labors	190,000 laborers
For the period of winter	36,000 laborers

These figures were obtained as the result of the investigation made by the prefects of each Department. It is possible that the prefects overstated somewhat the requirements of their respective Departments.

These figures lead to the conclusion that French agriculture requires from 200,000 to 250,000 laborers for those tasks which have a certain degree of permanency, and in addition thereto a supplementary supply of labor for the temporary tasks of haymaking and harvesting. For these tasks, however, it is possible to make extensive use of female labor.

If we estimate at 70,000 or 80,000 the number of men that can be obtained by granting furloughs to soldiers of more advanced years and by various military arrangements which are now under consideration it will be necessary to obtain not less than 150,000 agricultural laborers from the civil population during more than half of the year.

(b) For transportation and revictualing—railways, transportation by river, building of tugs, port works, etc.—there is needed at least 50,000 laborers. (Revictualing here comprises the transportation of products.)

(c) For public works (which means mines only, since the labor required in connection with water power is taken care of by the Ministry of Munitions) 16,500 laborers.

(d) For the operations of munitions manufacture and other manufactures for war purposes, 103,000 laborers.

(e) For labor carried on in the rear of the army zone, and auxiliary to army labor, 20,000 to 25,000 laborers.

(f) Commissariat, 15,000 laborers; engineer corps, 8,000; aeronautics, 3,000; or a total of 26,000 laborers.

(g) Marine, 3,000 laborers.

This enumeration gives the total of 365,000 to 370,000 laborers as the total requirements of civil laborers. In this total, the replies received take into account less than 20,000 women, since female labor has generally been available in sufficient quantities. It is well within the mark to assume that, in the total of 365,000 to 370,000 laborers required, the judicious employment of women, either directly or in place of men now actually employed, can furnish from 50,000 to 70,000 additional hands. The number of male laborers required and now lacking may thus be reduced to a total of approximately 300,000.

Answer to the second question.

The following table indicates the labor resources which have been obtained or which may be obtained from the colonies or from foreign countries:

North African.....	50,000
(Tunisians, 12,000; other North Africans, 8,000 are surely available; and of doubtful availability, 60,000. Of the latter figure one-half are considered as actually available.)	
Chinese.....	20,000
Indo-Chinese.....	30,000
Madagascans.....	10,000
Greeks, Italians, Portuguese.....	10,000
Spaniards.....	50,000
	170,000

It is possible, perhaps, to obtain a larger number of North Africans and of Spaniards, and perhaps less men from the other countries named. In any case it is necessary to reckon upon a minimum of six months for the gradual arrival of these additions to the labor force.

It is not possible to furnish definite figures concerning the availability of these laborers for each group of occupation, for these foreign contingents are not assigned to particular groups of employment determined in advance but are distributed, upon their arrival, according to the most urgent needs for labor. Each of the indicated groups of laborers may in fact prove unfit for the work to which they are assigned. It is practically impossible to distribute these laborers by any preconceived system of distribution.

However, as regards agriculture, it has been decided to reserve 12,000 Tunisians; and agriculture may also count on more than half of the Spaniards. Little help can be expected from the other categories. This will give agriculture a total of 45,000 laborers, still leaving a deficit of more than 100,000 exclusively for agricultural requirements having a more or less permanent character.

As a whole, therefore, the deficit amounts to at least 200,000 laborers, of which it would be prudent to estimate that 150,000 must be male laborers.

Answer to the third question.

Frequent appeals have been addressed to the unemployed, to refugees, to female laborers, and to persons receiving pensions or other public allowances; these appeals have been made by the prime minister at the beginning of the war, and by the minister of munitions, the minister of war, the minister of the interior, and the minister of labor; it can not be said that these appeals were not fruitful, when it is noted how important a contribution has been made to agricultural labor by the female population, and the prodigious increase in the number of persons employed in all the branches of production for war purposes; when we note the influx of new labor at our ports, and particularly the number of women in the manufactures of munitions and war materials, in which the number of female laborers has increased from a few thousand to approximately 400,000. * * *

One may obtain a fair notion of the transformation that has taken place in the distribution of laborers by noting the figures collected during the several investigations made by the labor inspectors and published in several bulletins of the Ministry of Labor. The last of these investigations resulted in the following table, indicating the situation in July, 1916, and at certain previous dates.

Occupational group.	Percentage of occupied workers, compared with normal.					
	August, 1914.	January, 1915.	July, 1915.	January, 1916.	April, 1916.	July, 1916.
1. Foodstuff industries.....	44	68	78	86	85	83
2. Chemical industries.....	43	67	78	90	94	96
3. Rubber, paper, cardboard.....	34	53	64	72	73	76
4. Book and printing industries.....	36	45	49	59	52	54
5. Textile industries, properly so called.....	29	62	71	75	76	76
6. Work in textiles and clothing, straw, feathers, hair.....	32	59	70	74	78	79
7. Leather and skins.....	39	64	72	78	81	84
8. Wood industries.....	20	41	51	60	63	67
9. Metallurgy—work in ordinary metals.....	32	62	84	109	117	125
10. Work in fine metals.....	15	32	42	41	55	60
11. Cutting of precious stones.....	15	34	43	47	47	48
12. Cutting of stones, and molding, quarrying, stone construction, building.....	22	27	38	42	51	49
13. Stoneware and pottery.....	18	33	29	44	45	48
14. Warehousing and transport.....	49	68	83	95	98	96
15. Various commercial activities.....	51	59	65	67	68	70
General percentages.....	33	57	70	80	84	87

It is evident that the mobilization of troops took out of the several occupations a large percentage of male workers, and it is therefore interesting to note the labor situation in the various groups of occupations, if we eliminate the mobilized laborers. From this point of view, the following table is of interest, indicating the total number of laborers in each group of occupation, if the mobilized laborers are eliminated from consideration.

Occupational group.	Proportion of mobilized workers.	Comparison with normal number, mobilized workers deducted.					
		August, 1914.	January, 1915.	July, 1915.	January, 1916.	April, 1916.	July, 1916.
	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	<i>Per ct.</i>	
1. Foodstuffs.....	26	-30	-6	+4	+12	+12	+14
2. Chemical industries.....	27	-30	-6	+5	+17	+21	+25
3. Rubber, paper, cardboard.....	19	-47	-28	-17	-9	-8	-5
4. Printing and bookmaking.....	24	-40	-31	-27	-26	-24	-22
5. Textile industries, properly so called.....	15	-56	-23	-12	-8	-7	-7
6. Work in textiles, clothing, straw, hair, feathers.....	6	-62	-35	-24	+29	-16	-15
7. Leather and skins.....	26	-35	-10	-2	-4	+7	-10
8. Works in wood.....	30	-50	-29	-19	+10	-7	-3
9. Metallurgy—work in ordinary metals.....	32	-36	-6	+16	-41	+49	-57
10. (Work in fine metals.....)	23	-62	-44	-35	-27	-24	-20
11. (Cutting of precious stones.....)							
12. Cutting of stones and molding, quarrying, construction in stone, building.....	33	-45	-40	-29	-25	-16	-18
13. Pottery and stoneware.....	33	-54	-39	-33	-28	-27	-24
14. Warehousing and transport.....	33	-19	0	+15	+27	+30	+28
15. Various commercial activities.....	25	-24	-16	-10	-8	-7	-5
	24	-43	-19	-6	+4	+8	+11

MEASURES OF PROTECTION FOR WORKING MOTHERS IN FRANCE.

In France, as in England, the exigencies of the war have taken large numbers of women into establishments in which formerly only men were employed, and in some instances at least married women

have been engaged on work and under conditions unsuited to their condition. In December, 1916, the Academy of Medicine, "considering that the growing employment of women in factories constitutes a grave danger to the future of the race unless the expectant mothers and mothers who are nursing their babies are immediately and sufficiently protected," passed a series of resolutions dealing with the subject. In the same month the committee on woman's labor passed similar resolutions, and a few weeks later the minister of munitions issued a circular calling the attention of all employers to these recommendations, and urging their observance. The resolutions and the text of the circular are given in a recent number of the *Bulletin du Ministère du Travail*.¹

The two series of resolutions cover much the same ground. Both urge that women who are expecting motherhood or who are nursing their babies should be employed only at work demanding but moderate effort, and not requiring continuous or even long-continued standing. Any work which is liable to bring on miscarriage, to over-fatigue them, or to cut short their time for sleep should be prohibited. When possible they should be employed on a half-day shift with a maximum of six hours' nightwork, and all work exposing them to industrial poisons, or to injurious or insanitary surroundings should be absolutely prohibited.

Under a law of June, 1913, a woman has the right to leave her work, without sacrificing her position, four weeks before her confinement. It is recommended that this optional rest should be obligatory upon all women employed in factories, and particularly in factories working upon war material. Moreover, on the advice of a doctor this period should be extended, the rest beginning before the ninth month of pregnancy and continuing for four weeks or longer after confinement. During the whole period of pregnancy the worker should be given opportunity for regular consultations either with a doctor or with a midwife under a doctor's supervision.

Furthermore, it is recommended that in all factories engaged on war work, if women are employed, it should be obligatory to set aside a room furnished with cradles, etc., to be used exclusively for breast-fed babies. Here they should remain under the care of competent nurses while the mothers are at work, and the mothers should be given a half hour off, morning and afternoon, for the purpose of nursing them. In addition to these "chambres d'allaitment," which must be reserved solely for the above purpose, the establishment of crèches for bottle babies, and of day nurseries for babies in their second, third, or fourth year, is recommended.

¹France. *Bulletin du Ministère du Travail et de la Prévoyance Sociale*, January to March, 1917. Paris, 1917, pp. 71-73, 16*-19*.

The Academy of Medicine, as might be expected, rather stresses the doctor's part in this program, recommending that the factory physician should supervise the work of women of both these classes, having the right to enforce such changes from one occupation to another, or such modifications in hours and kind of work done as he may consider desirable from the standpoint of the baby's health, even to the point of excluding the mother from factory work altogether. The academy also strongly recommends the creation in every establishment in which women are employed of a position corresponding to that of the welfare worker in English factories, filled by a woman specially charged with the duty of seeing that the peculiar needs of women workers are not overlooked or neglected.

Both bodies unite in recommending that the women who, either in view of approaching motherhood or because they are nursing their babies, receive these special modifications or reductions of work should not suffer any reduction of wages as a consequence. If they do actually suffer such a reduction, as, for instance, would be the case with women working on piece rates, the difference should be made up to them by a bonus for nursing their baby, or a maternity benefit or some other form of indemnity.

This point is specially emphasized by the minister of munitions in a circular of January 4, 1917, recommending the adoption of these measures:

The woman who is about to become a mother has a right to special consideration, and ought not, as a consequence of her motherhood, to suffer any detriment. Many employers fully appreciate this, and have already adopted regulations which guarantee to their workers in this situation either their usual wages or a maternity benefit which will keep their income up to its usual figure. I believe that the general adoption of such measures is an imperative duty for all employers.

The minister further urges that special care should be taken to guard the health of all women workers, and since the individual employer may well hesitate to take up a line of work like this with which he is wholly unfamiliar, he recommends the formation of associations of employers to study the subject, to decide upon the most promising lines of effort, and to put the results of their investigations at the disposal of all their members. Such an association has been formed, he says, among some of the employers of Paris with very beneficial results:

Such an association will promote the fitting up of nursing rooms (*chambres d'allaitment*) in the establishments of its members. It will establish crèches and day nurseries to be used by several factories in common. It will supervise the drawing up of uniform rules regulating the work of expectant mothers and mothers with young babies. Perhaps, most important of all, it will enter into relation with other societies especially qualified to advise in these undertakings to secure for it the necessary personnel and to assure proper medical control.

LODGING OF ARTILLERY AND MUNITION WORKERS IN FRANCE.

A circular was issued by the secretary of state (artillery and munitions bureau) on July 19, 1916, relative to the lodging of workers in establishments engaged in the manufacture of artillery and munitions.¹

The following is a condensed translation of the principal betterments directed to be installed.

Because of the considerable increase in the number of employees great difficulty has been encountered in securing lodgings in the immediate vicinity of the establishments and many of them have been compelled to provide temporary lodgings for their employees.

Whatever care may have been exercised in the provisional measures installed in the cantonments, the authorities are satisfied that many improvements may be instituted, and attention is called to the following requirements: Compliance with the decree of August 13, 1913, enumerating the conditions which are satisfactory in regard to the dormitories for employees, but there are other provisions which are to be considered as imperative, and employers must conform to these instructions or report to the department why such installations are impossible.

Dormitories occupied by employees must have a capacity of at least 14 cubic meters (494.4 cubic feet) per person lodged. Rooms less than 2.6 meters (8 feet 6 $\frac{1}{2}$ inches) in height must be thoroughly ventilated by means of windows or other movable sash openings to the outside air. A continuous ventilation must be assured, which may be obtained by means of openings in the roof.

In all cantonments it is advisable to provide ceilings separated from the roof, when the roof and ceiling form one structure it should be impermeable and provided with an air space between the inside and outside walls, or with a material resisting sudden atmospheric changes, and have a cover without cracks.

Floors must be impermeable or surfaced with an impermeable layer, easily washed. When possible the floor should be so arranged as to permit constant ventilation below it and to isolate completely the dormitory from the ground.

The distance between beds must not be less than 80 centimeters (2 feet 7 $\frac{1}{2}$ inches). Each person must be furnished with bedding for his exclusive use as follows: A frame separating the couch from the floor by at least 30 centimeters (11.8 inches), a straw mattress, a pillow, pair of sheets, a blanket, and for his clothing a rack or ventilated closet. Cleanliness and proper repairs must be maintained.

¹ France. Bulletin du Ministère du Travail et de la Prévoyance Sociale, December, 1916. Paris, 1916, pp. 165-167.

Sheets must be laundered at least once each month and changed with each occupant. Sleeping quarters must be unencumbered and kept in a state of constant cleanliness either by washing, scrubbing, or by using damp cloths every day and all soiled clothing and bedding removed. Beds must be made up each day, and when necessary precautionary measures must be taken for destruction of insects.

Washbowls must be furnished, one for each six persons lodged, and shower baths are recommended.

Drinking water must be provided. It is desirable that barracks laundries be established and precautions be taken to provide for the disposal of refuse and used water.

Notice is given in this circular that plans have been prepared suitable for proposed constructions showing approved types which may be adopted according to the varying needs of establishments.

These are the improvements which you are required to install in the barracks established by you. Not only should you be interested in this subject with a view to securing lodgment for laborers unable to find lodging in the locality, but that you may investigate the conditions in which laborers from distant localities are lodged in private lodgings. It is believed that in many cases lodgings are quite defective, and you are requested to lend aid to the proper authorities in recommending such measures as are calculated to remedy insanitary conditions. If it is impossible to find sanitary lodgings you will proceed to build new and comfortable barracks in which laborers will find their welfare provided for as well as all possible liberty, and so compel private enterprise to maintain sanitary lodging conditions.

FRENCH OCCUPATIONAL CENSUS OF 1911.

In connection with the general population census of March 5, 1911, the French statistical office has also taken an occupational census the results of which have recently been published.¹ In compiling the present occupational census the statistical office adopted a method different from that used in the compilation of the censuses of 1896, 1901, and 1906. In the latter three censuses the gainfully employed population (*population active*) was classified by collective industries. This method of classification had also been recommended in the resolutions adopted in 1905 by the International Statistical Institute on the occasion of its convention in London. Although admitting that more accurate results are obtained by this method the French statistical office in the present occupational census has

¹ France. Ministère du Travail et de la Prévoyance Sociale. Statistique Générale de la France. Résultats statistiques du recensement général de la population effectué le 5 Mars 1911. Vol. 1, part 3: Population active. Paris, 1916. 183 pp.

adopted classification by individual occupations. It is stated that, notwithstanding its imperfections, classification by this latter method was necessary for certain statistical studies, such as comparisons of the data of the occupational census with occupational statistics obtained from the civil registers of the communes, statistics relating to depositors in savings banks, licensed occupations, bankruptcies, criminals, etc.

The individual schedules were classified in accordance with a list giving the nomenclature of about 180 different occupations and professions, and to make possible a comparison of the results with those of preceding censuses the various occupations were also grouped into collective industries and professions. In addition the schedules were classified according to the position occupied on the date of the census by each person enumerated, i. e., as employer (owner of an establishment), salaried employee, workman, or temporarily unemployed, and by sex, age, conjugal condition, nationality, and literacy.

A brief summary of the principal results of the above census is given below.

TOTAL GAINFULLY EMPLOYED POPULATION

Of the total French population on March 5, 1911, of 39,192,133 persons, 20,931,221, or 53.4 per cent, were gainfully employed. The corresponding percentage for 1906 and 1901 was 53.3 and 50.6, respectively. The classification by sex shows that of the above 20,931,221 persons, 13,212,207 were males, i. e., 68.6 per cent of the total male population (19,254,444), and 7,719,014 were females, i. e., 38.7 per cent of the total female population (19,937,689). In 1906 the respective percentages were 68.2 and 39. It should be noted that the data relating to gainfully employed persons do not include French citizens sojourning abroad on the date of the census, or aliens, who, although residing in foreign countries, come daily to France to work there.¹ Persons living exclusively on their incomes, women attending only to their household duties, inmates of penal institutions and hospitals, and travelers without occupation were likewise not included.

The following table shows by sex and large collective industry groups the distribution of the gainfully employed population for the years 1866, 1881, 1906, and 1911:

¹ This applies especially to persons residing in localities on the Belgian frontier. In 1906 it was estimated that 28,000 of these came daily to France to earn their living.

GAINFULLY EMPLOYED POPULATION OF FRANCE BY COLLECTIVE OCCUPATIONAL GROUPS AND SEX, 1866, 1881, 1906, AND 1911 (IN THOUSANDS OF POPULATION).

Collective occupational group.	1866			1881			1906			1911		
	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.
Agriculture.....	5,330	1,868	7,198	5,464	2,392	7,856	5,452	3,325	8,777	5,279	3,238	8,517
Industry.....	3,290	1,304	4,594	3,177	1,484	4,661	4,675	2,518	7,193	4,951	2,535	7,486
Commerce.....	781	242	973	1,123	483	1,606	1,290	779	2,069	1,218	835	2,053
Liberal professions and public administration.....	460	165	625	505	185	690	740	292	1,032	888	337	1,225
Domestic service.....	226	1,047	1,273	344	812	1,156	173	773	946	158	771	929
Total.....	10,037	4,626	14,663	10,613	5,356	15,969	12,330	7,687	20,017	12,494	7,716	20,210
Army, navy, merchant marine, fishing.....	454	7	461	515	6	521	697	7	704	718	3	721
Not specified.....	9	10	19	68	123	191	.....	.....	.....	.....	.....	.....
Gainfully employed.....	10,500	4,643	15,143	11,196	5,485	16,681	13,027	7,694	20,721	13,212	7,719	20,931
Without occupation.....	8,514	14,410	22,924	7,460	13,264	20,724	6,073	12,051	18,124	6,042	12,219	18,261
Total population.....	19,014	19,053	38,067	18,656	18,749	37,405	19,100	19,745	38,845	19,254	19,938	39,192

According to the preceding table the gainfully employed population has increased from 15,143,000 in 1866 to 20,931,000 in 1911. This increase is, however, in a considerable measure due to omissions in the census of 1866. In 1911, for instance, the number of females employed in agriculture is given as 3,238,000 and in 1866 as 1,868,000. In 1866, however, the wives of agriculturists were generally not considered as exercising a gainful occupation. Agricultural male and female laborers, on the other hand, were classified as domestic servants in 1866, while in 1911 they were classified as persons employed in agriculture.

In industry, inclusive of transportation, there were employed 7,486,000 persons in 1911, as compared with 4,594,000 in 1866, the increase being nearly two-thirds. Commerce shows a still larger increase, the number of persons employed in commercial occupations having increased from 973,000 in 1866 to 2,053,000 in 1911. The increase in the number of persons employed in liberal professions and public service is nearly as large as that in the number of those engaged in commerce. These increases are largely due to the development of industry and commerce, partly, however, to omissions in the census of 1866.

In order to remove the influence of these omissions the French statistical office has compiled a table, which shows the distribution per 1,000 gainfully employed persons among the principal occupational groups with omission of domestic service, army, navy, and fishing. This table shows the following results:

DISTRIBUTION OF EACH 1,000 GAINFULLY EMPLOYED PERSONS AMONG THE PRINCIPAL COLLECTIVE OCCUPATIONAL GROUPS, BY SEX, 1866, 1881, 1901, AND 1911.

Collective occupational group.	1866			1881			1901			1911		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Agriculture.....	543	522	537	532	526	530	459	442	453	428	466	442
Industry.....	335	364	343	310	327	315	382	353	386	401	365	388
Commerce.....	75	68	73	109	106	108	98	116	104	99	120	106
Liberal professions and public administration....	47	46	47	49	41	47	61	49	57	72	49	64
Total.....	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

During the period 1866-1911 the relative number of persons gainfully employed in agriculture has gradually decreased from 537 to 442 per 1,000 persons employed in the principal occupations, a decrease equivalent to 18 per cent. The other three principal occupations, industry, commerce, and the liberal professions and public administrative service, all show an increase in the relative number of persons engaged in them in 1911 as compared with that in 1866. The increase is largest for commercial occupations.

GAINFULLY EMPLOYED POPULATION BY STATUS AND INDIVIDUAL OCCUPATION.

The distribution of the gainfully employed population among the principal occupations, with the exclusion of soldiers, sailors, and fishermen, by their status (employer, salaried employee, and workman), is shown in the following table for the census of 1906 and 1911:

DISTRIBUTION OF THE GAINFULLY EMPLOYED MALE AND FEMALE POPULATION AMONG THE PRINCIPAL OCCUPATIONS, BY THEIR STATUS, 1906 AND 1911.

Occupation.	Employers and owners of establishments.		Salaried employees.		Workers.	
	1906	1911	1906	1911	1906	1911
<i>Males.</i>						
Agriculture.....	2,998,177	2,872,935			2,397,950	2,406,540
Industry:						
Mining, etc.....	12,679	8,415			213,153	231,636
Manufacturing.....	1,116,248	1,006,155	149,616	105,347	2,246,726	2,442,055
Transportation.....	55,587	37,870	124,232	143,471	849,671	975,980
Total.....	1,184,514	1,052,440	273,848	248,818	3,309,550	3,649,671
Commerce.....	604,601	607,945	415,397	537,313		
Liberal professions.....	115,639	121,712	288,996	346,568		
Domestic service.....					214,400	158,524
Public administration.....			263,935	278,670	205,423	213,093
Total Males.....	4,902,931	4,655,032	1,242,176	1,411,369	6,127,323	6,427,828
<i>Females.</i>						
Agriculture.....	2,377,393	2,346,529			948,704	891,226
Industry.....	1,023,919	1,037,350			1,510,883	1,475,923
Commerce.....	489,317	509,263	142,517	162,470		
Liberal professions and public administration.....	37,927	33,663	256,221	295,998	19,409	14,278
Domestic service.....					840,033	949,083
Total Females.....	3,928,556	3,926,805	398,738	458,468	3,319,929	3,330,510

A comparison of the figures for 1906 and 1911 in the preceding table shows that the decrease in the number of employers of the male sex is nearly equally distributed among employers in agriculture and industry. The figures for the liberal professions show hardly any change and those for commerce show a slight increase for 1911. The increase in 1911 in the total number of male workers, on the other hand, is chiefly due to the increase in the number of workers employed in industry, the number of male agricultural workers having increased but very slightly. The number of male salaried employees shows a considerable increase in men employed in commerce and the liberal professions. It should, however, be noted that office clerks, bookkeepers, etc., are included in the latter designation.

For the female sex the variations from 1906 to 1911 were much less pronounced than for the male sex. The number of female employers or owners of establishments has remained nearly the same and that of workers merely shows a slight increase. However, as in the case of the male sex, there was a considerable increase in the number of salaried employees.

A comparison of these summary results, by large occupational groups, is, however, insufficient. By comparison of more detailed data it can more easily be ascertained whether the increases observed are due to actual industrial development or to inaccuracies. Inaccuracies are very difficult to avoid in an occupational census. It is, for instance, not always possible to determine with accuracy whether a person enumerated is an employer or a workman whenever the data relating thereto in the individual schedules are incomplete. The French statistical office states, moreover, that in comparing the data for 1911 with those for 1906 too much significance should not be attached to abnormal variations in the data for these two years for individual occupations, as these variations are frequently due to differing methods of classification. In 1911, for instance, 25,519 railroad engineers and firemen were enumerated together with the other 241,699 railroad employees and workmen, while in 1906 they were enumerated with engineers and firemen of other industries. Or, to quote another example, cooks (male and female) were enumerated separately in 1911, while in 1906 they were included either in the personnel of hotels, restaurants, etc., or enumerated as domestic servants.

In the following table is shown the number of employers (owners of establishments) and that of salaried employees and workers, classified by individual occupations and sex, for 1906 and 1911.

DISTRIBUTION OF THE GAINFULLY EMPLOYED POPULATION AMONG INDIVIDUAL OCCUPATIONAL GROUPS, BY STATUS AND SEX, 1906 AND 1911.

Occupational or industry group.	Employers or owners of establishments.		Salaried employees and workmen.	
	1906	1911	1906	1911
<i>Males.</i>				
1. Agriculture:				
Owners of estates, tenants, share farmers.....	2,998,177	2,872,935		
Day laborers.....			1,869,257	1,881,842
Domestic servants.....			528,693	524,698
Total.....	2,998,177	2,872,935	2,397,950	2,406,540
2. Mining, quarrying, etc.....	12,679	8,415	213,153	231,636
3a. Manufacturing industries:				
Incorrectly determined occupation.....		1,671	27,399	17,058
Milling, grain trade.....	30,248	25,460	30,329	27,515
Bakers, confectioners, biscuit makers.....	66,929	62,834	87,901	91,853
Other occupations in industries of alimentation.....	33,705	31,435	58,878	60,736
Chemical products, paper, pasteboard.....	9,442	8,870	56,312	70,291
Printers, bookbinders, book sewers.....	10,967	11,057	60,799	67,234
Spinners, weavers, and other textile occupations.....	81,839	66,479	237,193	239,406
Tailors, cloak makers, etc.....	59,744	56,110	35,410	33,692
Other occupations in the working up of fabrics.....	22,786	21,844	31,094	37,638
Basket makers, leather trades.....	14,143	13,333	7,855	7,817
Tanners, tawers, saddlers, morocco tanners.....	29,976	28,437	52,573	59,054
Shoemakers, galosh makers.....	110,825	104,642	70,477	60,372
Sawyers, carpenters, joiners.....	137,796	112,792	217,962	237,902
Other woodworking occupations.....	134,645	120,091	140,036	128,349
Toy makers, button makers, brush makers.....	13,563	11,473	21,322	20,104
Metal workers, machinists, other metal workers.....	172,324	160,498	631,553	722,918
Goldsmiths, jewelers.....	5,030	5,939	14,480	15,494
Public works, building trades.....	170,256	153,383	384,209	467,755
Potters, glassworkers, enamellers.....	12,030	9,807	80,964	77,377
Total.....	1,116,248	1,006,155	2,246,726	2,442,055
3b. Loading, unloading, transportation:				
Journeyman, laborers, porters.....			533,863	590,197
Transportation on land and water.....	55,587	37,870	247,130	262,036
Railroads and street car lines.....			192,910	267,218
Total.....	55,587	37,870	973,903	1,119,451
4. Commerce:				
Miscellaneous.....	310,056	313,389	421,193	456,522
Grocers, fruiterers, etc.....	104,855	105,396	48,239	52,269
Butchers, tripe sellers.....	43,132	41,490	43,722	47,921
Licensed shops, restaurants, hotels.....	146,558	147,670	51,859	85,948
Total.....	604,601	607,945	565,013	642,660
5. Liberal professions:				
Legal: Lawyers, attorneys, bailiffs, notaries.....	24,080	24,175		
Ecclesiastic: Priests, monks.....			60,850	56,667
Office employees, cashiers, clerks, bookkeepers.....			177,841	226,225
Engineers, draftsmen, chemists.....			26,528	37,535
Physicians, druggists, veterinarians.....	39,930	44,450		
Drug clerks, nurses.....			23,777	26,141
Other liberal professions, artists, etc.....	51,629	53,087		
Total.....	115,639	121,712	288,996	346,568
6. Domestic service.....			214,400	158,524
7. Public service:				
Miscellaneous: Employees.....			49,415	56,751
Justice, police, prisons: Magistrates, employees.....			17,166	17,783
Bridges and roads: Engineers, employees.....			11,651	11,644
Postal, telegraph, and telephone service: Employees.....			25,042	30,517
Registry, taxes, custom house: Employees.....			60,396	60,135
Public and private instruction: Professors, teachers.....			100,285	101,840
Under clerks, messengers, office boys.....			59,082	60,915
Road laborers.....			93,837	95,982
Carriers, subagents, etc., in postal, telegraph, and telephone service.....			47,504	55,196
Total.....			469,358	491,763
Grand total.....	4,902,931	4,655,032	7,339,439	7,839,197
Total salaried employees.....			1,242,176	1,411,369
Total workmen.....			6,127,323	6,427,828

DISTRIBUTION OF THE GAINFULLY EMPLOYED POPULATION AMONG INDIVIDUAL OCCUPATIONAL GROUPS, BY STATUS AND SEX, 1906 AND 1911—Concluded.

Occupational or industry group.	Employers or owners of establishments.		Salaried employees and workmen.	
	1906	1911	1906	1911
<i>Females.</i>				
1. Agriculture:				
Owners of estates, tenants, share farmers.....	2,377,393	2,346,529		
Workers, day laborers.....			712,434	667,848
Agricultural domestic servants.....			236,270	223,378
Total.....	2,377,393	2,346,529	948,704	891,226
2. Industry:				
Miscellaneous industries.....	74,887	68,115	569,478	542,578
Industries of alimentation.....	43,249	45,359	20,945	19,425
Spinners, weavers, embroiderers, lace makers.....	144,105	136,179	338,755	362,647
Dressmakers, seamstresses, corset makers.....	599,349	607,856	423,799	395,350
Modistes, flower makers.....	52,471	66,134	67,659	70,940
Laundresses, ironers.....	109,858	113,707	90,247	84,983
Total.....	1,023,919	1,037,350	1,510,883	1,475,923
3. Commerce.				
Miscellaneous.....	124,927	130,316	129,609	122,381
Commerce in foodstuffs.....	182,809	188,922		
Licensed shops, restaurants, hotels.....	181,581	190,025			12,908	15,115
Total.....	489,317	509,263	142,517	162,470
4 and 5. Liberal professions and public service:				
Liberal professions.....	37,927	33,663		
Ecclesiastic: Nuns, etc.....			28,757	28,771
Office employees, typewriters.....			33,122	43,609
Postal, telegraph, and telephone employees.....			29,727	25,179
Public and private instruction.....			121,761	141,132
Nurses.....			51,914	57,307
Public service employees.....			19,409	14,278
Total.....	37,927	33,663	275,630	310,276
6. Domestic service.....				
7. Cooks.....			840,933	771,024
Grand total.....	3,928,556	3,926,805	3,718,667	3,788,978
Total salaried employees.....			398,738	458,468
Total workers.....			3,319,929	3,330,510

In the census of 1906 the nomenclature used for the occupations of workmen employed in industry and transportation was more detailed than that used in the census of 1911. For this reason more accurate comparative data for the two censuses can be given for these two large occupational groups and are reproduced here in the following table:

NUMBER OF WORKMEN GAINFULLY EMPLOYED IN INDUSTRY AND TRANSPORTATION, BY INDIVIDUAL OCCUPATIONS, 1906 AND 1911.

Occupation.	1906	1911	Occupation.	1906	1911
Food:			Iron and steel and metal—Con.		
Millers.....	30,329	27,515	Boiler makers.....	30,200	32,071
Brewers, distillers, workers in sugar factories, refiners.....	27,635	20,458	Founders, molders.....	22,273	35,750
Bakers, confectioners, biscuit makers.....	87,901	91,853	Engineers.....	103,512	119,775
Other workers in food indus- tries.....	31,243	40,278	Firemen.....	49,863	45,594
Total.....	177,108	180,104	Filters, machinists.....	106,956	123,600
Workers in chemical industries.....	26,191	33,926	Metal turners.....	33,770	40,191
Rubber, paper, and pasteboard workers.....	30,121	36,365	Electricians.....	18,480	31,778
Printers, bookbinders, booksewers.	60,799	67,234	Metal chasers, stampers, pol- ishers.....	18,716	14,847
Textiles and clothing:			Brass and bronze founders.....	5,593	7,035
Spinners.....	64,286	66,126	Tinsmiths, tinner, lamp makers.....	19,943	21,229
Weavers.....	137,820	132,768	Engravers, gilders, nickel platers.....	4,153	6,052
Finishers, bleachers, dyers.....	35,087	40,512	Watchmakers.....	11,784	11,285
Tailors, cloak makers.....	35,410	33,092	Total.....	631,553	722,918
Other workers in the clothing industry.....	31,094	37,638	Goldsmiths, jewelers.....	14,480	15,494
Total.....	303,697	310,136	Public works, building trades:		
Hides, skins, etc.:			Stonecutters, monumental masons.....	26,365	45,574
Basket makers, feather makers.	7,835	7,817	Excavators, pavers, cement workers.....	81,162	101,856
Tanners, tawers.....	31,901	32,262	Plumbers, zinc workers.....	15,632	20,945
Saddlers, horse, collar makers, case makers, morocco tan- ners.....	20,672	26,792	Roofers.....	18,742	21,205
Shoemakers, galosh makers, glove makers.....	70,477	60,372	Masons, plasterers.....	177,162	210,326
Total.....	130,885	127,243	Painters, glaziers, bill posters.	65,146	67,849
Woodworking:			Total.....	384,209	467,755
Sawyers, woodcutters, vari- ous occupations.....	68,219	71,784	Ceramics and glassmaking:		
Carpenters.....	57,588	61,010	Lime burner, brickmaker, potter.....	40,645	35,924
Joiners.....	115,619	122,817	Crockery maker, porcelain maker.....	9,589	10,772
Wheelwrights, carriage makers	41,116	41,574	Glassmaker, looking-glass maker, glass enameler.....	30,730	30,681
Coopers.....	24,675	20,428	Total.....	80,964	77,377
Cabinetmakers.....	40,781	38,638	Loading, unloading, and trans- portation:		
Coopers (wood, bone, etc.).....	7,118	6,931	Journeyman, laborers, porters.	533,863	590,197
Toy makers, button makers, brush makers.....	14,204	13,263	Packers, packing-case makers.	8,462	10,933
Total.....	379,320	386,445	Warehouse workers.....	24,990	33,210
Iron and steel and metal:			Teamsters, carters.....	79,923	58,922
Iron and steel workers.....	73,162	101,326	Drivers, delivery men.....	111,552	113,091
Blacksmiths (heavy), edge- tool makers.....	77,113	73,368	Chanfleurs.....	7,105	20,955
Blacksmiths.....	56,035	57,117	Other transportation workers.	15,098	25,015
			Railroad and street car em- ployees.....	68,678	123,747
			Total.....	849,671	975,980

The increases or decreases from 1906 to 1911 in the number of workmen employed in the food, textile, clothing, woodworking industries, and in preparation of hides and skins, as shown in the preceding table are relatively so unimportant that they do not require any comment. In the chemical industries a notable increase in the number of workmen is evident. More considerable increases took place in the number of workers of the iron and steel and metal industries—especially electricians, engineers, fitters, machinists, and metal turners—and in that of workmen employed on public works and in the building trades. The increase in the number of ceramic and glass workers is very small. In the group of transportation workers

the number of chauffeurs shows the largest increase. The decrease in the number of teamsters and carters is merely apparent, because in the census of 1911 teamsters and carters employed in agriculture (29,693) were enumerated as agricultural workers. The increase in the number of railroad and street car workers is also merely apparent, for the reason that in 1906 railroad engineers and firemen and all other railroad workers exercising special trades such as blacksmith, etc., were enumerated among their trades and not as railroad workers.

GAINFULLY EMPLOYED POPULATION BY SEX.

It has already been stated that in 1911 of the total gainfully employed population of France of 20,931,221 persons, 13,212,207 were males and 7,719,014 were females, the former, therefore, formed 63.1 per cent and the latter 36.9 per cent of the above total. Below is shown the proportion of females gainfully employed per 1,000 persons of both sexes gainfully employed in the principal occupational groups, not including soldiers, sailors, and fishermen, for the censuses of 1901, 1906, and 1911.

PROPORTION OF FEMALE PERSONS PER 1,000 PERSONS OF BOTH SEXES GAINFULLY EMPLOYED IN THE PRINCIPAL OCCUPATIONAL GROUPS, 1901, 1906, AND 1911.

Occupational group.	Number of females per 1,000 persons of both sexes gainfully employed.		
	1901	1906	1911
Agriculture.....	325	379	380
Industry.....	337	348	348
Commerce.....	371	377	406
Liberal professions and public administrative service.....	288	283	275
Domestic service.....	820	816	830
Total.....	356	382	382

In agricultural and industrial occupations female persons were represented in the same proportion as in 1911. The large increase in the number of female persons employed in agriculture as compared with the number so employed in 1901 is merely apparent and due to the fact that in the censuses of 1906 and 1911 the wives of agriculturists were more frequently enumerated as gainfully employed than was done in the census of 1901. The proportion of women employed in commercial occupations increased from 377 per 1,000 in 1906 to 406 in 1911, while the number of women in liberal professions and in the public administrative service decreased from 283 per 1,000 in 1906 to 275 in 1911. In domestic service the proportion of women employed had slightly increased in 1911, as compared with that for the two preceding censuses. The proportion of women of the total gainfully employed population, exclusive of soldiers, sailors, and fishermen, was the same in 1911 as in 1906.

GAINFULLY EMPLOYED POPULATION BY CONJUGAL CONDITION.

The following table shows in relative figures (per 1,000 persons) the proportion of married persons in 1911 of the gainfully employed population of France, by sex, occupational group, and status:

PROPORTION OF MARRIED PERSONS PER 1,000 PERSONS GAINFULLY EMPLOYED, BY SEX, OCCUPATIONAL GROUPS, AND STATUS, 1911.

Occupational group.	Males.					Females.				
	Em- ploy- ers.	Sal- aried em- ploy- ees.	Work- ers.	Unem- ployed.	Total.	Em- ploy- ers.	Sal- aried em- ploy- ees.	Work- ers.	Unem- ployed.	Total.
Agriculture.....	834	.....	298	351	589	892	.....	276	111	722
Industry.....	867	762	548	483	612	516	357	331	387	408
Commerce.....	840	437	.....	397	638	680	253	.....	291	514
Liberal professions.....	665	409	.....	420	488	392	115	.....	248	177
Domestic service.....	.....	.....	550	381	546	.....	.....	215	201	215
Public administrative service.....	.....	765	823	.....	757	.....	297	374	.....	303
Total.....	824	544	462	463	606	761	242	287	332	525

According to the preceding table the largest number of married male employers is found among those engaged in agriculture (83.4 per cent) and the smallest number among those engaged in liberal professions (66.5 per cent). As regards male salaried employees the proportion of those married is largest among those employed in industrial establishments (76.2 per cent) and in the public service (70.5 per cent), while in commercial occupations and the liberal professions it is much smaller (43.7 and 40.9 per cent). The proportion of married men among wage workers of all occupations is only 46.2 per cent, or somewhat over half of that among employers. It is largest among industrial workmen (54.8 per cent) and men employed in domestic service (55 per cent), and lowest among agricultural workers (29.8 per cent).

The proportion of married women of the total number of women in gainful occupations has been smaller in all preceding censuses than the corresponding proportion for the male sex. This rule applies also to the census of 1911, only 52.5 per cent of the gainfully employed women being married as against 60.6 per cent of the gainfully employed men. Agriculture is the only large occupational group in which the percentage of married women is high, namely, 72.2 per cent. The proportion of married women among female wage workers was 28.7 per cent and among female salaried employees was still lower, i. e., 24.2 per cent. These two low percentages are explained by the fact that women in many instances discontinue their gainful occupation when they marry.

DISTRIBUTION OF GAINFULLY EMPLOYED POPULATION BY AGE GROUPS.

The distribution of the gainfully employed population of France, exclusive of soldiers, sailors, and fishermen, by five-year age groups, classified according to status and sex, is shown in the following table in relative figures for the year 1911:

DISTRIBUTION IN PER CENT BY AGE GROUPS OF THE GAINFULLY EMPLOYED POPULATION, CLASSIFIED BY STATUS AND SEX, 1911.

Age groups.	Employers or owners of establishments.		Salaried employees and wage workers.						Unem- ployed sala- ried em- ployees and wage workers.	
			Salaried employees.		Wage workers.		Total.			
	Male.	Fe- male.	Male.	Fe- male.	Male.	Fe- male.	Male.	Fe- male.	Male.	Fe- male.
Under 15 years.....			2.75	1.31	6.06	8.92	5.46	7.04	1.98	3.17
15 and less than 20 years.....	0.25	2.37	12.09	11.68	17.10	23.63	16.19	21.64	13.75	19.09
20 and less than 25 years.....	1.91	8.13	10.86	17.48	11.19	15.32	11.12	15.69	11.68	18.40
25 and less than 30 years.....	7.20	10.75	15.49	14.35	13.49	9.92	13.86	10.68	12.51	13.82
30 and less than 35 years.....	10.71	11.74	13.05	11.78	11.08	7.77	11.44	8.46	10.93	9.88
35 and less than 40 years.....	11.96	11.70	11.76	10.10	9.34	6.74	9.79	7.30	9.78	7.73
40 and less than 45 years.....	12.01	11.24	10.01	9.20	7.79	6.03	8.20	6.55	8.42	6.38
45 and less than 50 years.....	12.05	10.78	8.65	7.64	6.80	5.54	7.13	5.88	8.11	5.75
50 and less than 55 years.....	11.16	9.00	6.77	5.86	5.61	4.76	5.82	4.93	7.07	4.92
55 and less than 60 years.....	10.07	8.14	4.22	4.05	4.28	3.98	4.27	3.98	6.15	4.13
60 and less than 65 years.....	8.46	6.09	2.31	2.89	3.17	3.24	3.00	3.18	4.55	2.98
65 years and over.....	14.22	8.86	2.04	3.66	4.09	4.15	3.72	4.07	5.07	3.25
Total.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Average age in years.....	48	43	35	35	34	31	34	32	37	32

The five-year age groups in the preceding table in which the largest number of employers, or about 12 per cent, is shown are those from 40 to 45, and 45 to 50 years of age for male employers, and those from 30 to 35 and 35 to 40 years of age for female employers. The largest number of employees and wage workers is found in less advanced age groups: For male employees in that of 25 to 30 years (15.5 per cent) and for female employees in that of 20 to 25 years (17.5 per cent). As to wage workers, those 15 to 20 years of age form the densest group (17.1 per cent) among the male sex; in the next age group, 20 to 25 years, the proportion is only 11.2 per cent because men in military service are not included in the table. Female wage workers are found represented with the highest percentage (23.6 per cent) in the age group from 15 to 20 years.

As is to be expected, the group of employers shows the highest average age—48 years for male and 43 years for female employers. The average age of salaried employees is somewhat higher than that of wage workers. For the former it is 35 years for both sexes, and for the latter 34 for males and 31 for females.

LITERACY OF GAINFULLY EMPLOYED POPULATION.

Of the 20,931,221 persons gainfully employed in France, 20,643,038 have made a declaration in the schedules of the occupational census of 1911 as to their literacy. The compilation of the results in this respect has shown that 2,274,643, or 11 per cent, of these persons can neither read nor write. In 1906 the corresponding percentage was 13, and in 1901, 15. Illiteracy among gainfully employed male persons has decreased from 14 per cent in 1901 and 11.7 per cent in 1906 to 9.7 per cent in 1911. For gainfully employed female persons it has decreased from 17.8 and 15.9 per cent in the two preceding censuses to 13.2 per cent in 1911.

Considered by occupational groups illiteracy is highest in agriculture, 15.4 per cent of the men and 20.7 per cent of the women employed in it being illiterate. In industry the respective percentages are 7.8 and 8.4, and in commerce, 2.7 and 7.2.

NATIONALITY AND PLACE OF BIRTH OF GAINFULLY EMPLOYED PERSONS.

Of the total gainfully employed population of France in 1911 (20,931,221), 20,103,067 were native citizens, 147,904 were naturalized, and 680,250 were aliens living habitually in France and exercising their occupation there. Aliens, therefore, formed 3.25 per cent of the total gainfully employed population. Of the male aliens 68 per cent are employed in industry, 13 per cent in agriculture, and a like percentage in commerce. The female aliens are distributed as follows: Forty per cent in industry, 28 per cent in domestic service, 16 per cent in commerce, and less than 10 per cent in agriculture.

Of the total number of gainfully engaged French citizens 75.3 per cent were born in the Department in which they were enumerated, 24.4 per cent were born in some other Department, and .3 per cent were born outside of France. In 1906 the corresponding percentages were 76.5, 23.2, and .3.

PRESIDENT'S POSITION ON STATE LABOR LEGISLATION.¹

THE WHITE HOUSE, *June 4, 1917.*

MY DEAR GOV. BRUMBAUGH:

I take pleasure in replying to your letter of June 1.

I think it would be most unfortunate for any of the States to relax the laws by which safeguards have been thrown about labor. I feel that there is no necessity for such action, and that it would lead to a slackening of the energy of the Nation rather than to an increase of it, besides being very unfair to the laboring people themselves.

Sincerely yours,

WOODROW WILSON.

¹ Letter to Governor of Pennsylvania, as published in Official Bulletin, June 6, 1917.

SUSPENSION OF FEDERAL EIGHT-HOUR LAWS.

EXECUTIVE ORDER.

Under authority contained in the Naval Appropriation Act approved March 4, 1917 (Public No. 391, 64th Congress), whereby it is provided—

That in case of national emergency the President is authorized to suspend provisions of law prohibiting more than eight hours labor in any one day of persons engaged upon work covered by contracts with the United States: *Provided further*, That the wages of persons employed upon such contracts shall be computed on a basic day rate of eight hours work with overtime rates to be paid for at not less than time and one-half for all hours work in excess of eight hours; it is hereby ordered that the provisions of the act approved June 19, 1912, limiting the hours of daily service of mechanics and laborers on work under contracts to which the United States is a party are suspended with respect to all contracts for ordnance and ordnance stores and other military supplies and material, contracts for buildings under construction or to be constructed at the arsenals, and contracts for fortification work during the pending emergency and until further orders. This order shall take effect from and after this date.

WOODROW WILSON.

THE WHITE HOUSE, *24th March, 1917.*

EXECUTIVE ORDER.

Under authority contained in the Naval Appropriation Act approved March 4, 1917 (Public, No. 391, 64th Cong.), it is hereby ordered that the provisions of the Eight-hour Act of June 19, 1912, are suspended with respect to persons engaged upon work covered by contracts with the United States, made under the War Department, for the construction of any military building or for any public work which, in the judgment of the Secretary of War, is important for purposes of national defense in addition to the classes of contracts enumerated in Executive order of March 24, 1917.

It is further declared that the current status of war constitutes an "extraordinary emergency" within the meaning of that term as used in the Eight-hour Act of March 3, 1913 (37 Stat., 726), and that laborers and mechanics employed on work of the character set forth above, whether employed by Government contractors or by agents of the Government, may, when regarded by the Secretary of War as necessary for purposes of national defense, be required to work in excess of eight hours per day, and wages to be computed in accordance with the proviso in the said act of March 4, 1917.

This order shall take effect from and after this date and shall be operative during the pending emergency or until further orders.

WOODROW WILSON.

THE WHITE HOUSE, *28th April, 1917.*

INJUNCTIONS UNDER THE FEDERAL ANTITRUST LAW.

The act of Congress of July 2, 1890 (26 Stat., 209), forbidding contracts, combinations, and conspiracies in restraint of trade or commerce among the several States, popularly known as the Sherman Act, in its fourth section authorizes injunctions to prevent and restrain violations of the act. Certain lumber companies undertook to obtain an injunction against the United Brotherhood of Carpenters and Joiners of America and other labor organizations and their officials on account of alleged conspiracy to restrain interstate trade and commerce in the products of the complainants' wood-working mills, the method used being mutual agreements and boycotts. The United States District Court, Southern District of New York, found that the defendant organizations were engaged in a combination directly restraining competition between manufacturers and operating to restrain interstate commerce in violation of both Federal and State acts. This court dismissed the bill for an injunction, however, on the ground that such relief under the Federal antitrust law could be procured only at the instance of the United States acting through its officers. The law of the State of New York was also relied upon (General Business Law, sec. 580, subd. 6). The court held that only the State of New York could act, so that the complainants were without power to obtain relief personally in this suit. (*Paine Lumber Co. (Ltd.) v. Neal et al.* (1913), 212 Fed. 259.)

The United States circuit court of appeals took the same view as the court below as to the nature of the combination between the labor organizations and affirmed a decree dismissing the complaint. This court took the ground that the acts of the organizations were not malicious and not directed against the individual complainants personally, so that relief by injunction could not be granted, irrespective of whether or not the particular combination in question was obnoxious either to the common law or to the statutes (same case (1914), 214 Fed., 82; 130 C. C. A., 522).

The case then came to the Supreme Court on appeal, the majority of the court holding (June 11, 1917) that violations of the Federal antitrust act were not to be remedied by an injunction on the suit of a private person, citing as authority their prior opinion in *Minnesota v. Northern Securities Co.* (1904), 194 U. S., 48. This was held to be true even though the court should go behind the apparent conclusion of both courts below as to the absence of special damage shown, and reverse their conclusion of fact. This question was not discussed at length, however, Mr. Justice Holmes, who delivered the opinion of the court, saying, "Personally, I lay those questions on one side, because, while the act of October 15, 1914,

chapter 323, section 16, 38 Statutes, 730 [the Clayton Act], establishes the right of private parties to an injunction in proper cases, in my opinion it also establishes a policy inconsistent with the granting of one here. I do not go into the reasoning which satisfies me, because on this point I am in a minority."

Mr. Justice McReynolds dissented without opinion. A dissenting opinion was written by Mr. Justice Pitney, with whom Mr. Justice McKenna and Mr. Justice Van Devanter concurred. These justices did not regard the case of *Minnesota v. Northern Securities Co.* as an authority for the position taken by the majority of the court. The diversity of position of the lower courts is commented upon, and the basic decision on which the refusal to allow private persons the right of injunction under the Sherman (antitrust) Act rested was spoken of as resting on grounds that had been misunderstood, while few of the cases following this opinion contained any reasoning upon the question, and that of a meager and unsatisfactory nature. It was pointed out that the Clayton Act safeguards labor "organizations while pursuing their legitimate objects by lawful means, and prevents them from being considered, merely because organized, to be illegal combinations or conspiracies in restraint of trade. The section, fairly construed, has no other or further intention or meaning."

OVERTIME WORK AND WAGES FOR WOMEN IN CALIFORNIA CANNERIES.¹

In February, 1916, the California Industrial Welfare Commission issued orders fixing minimum wages, hours of labor, and sanitary conditions for women and minors in fruit and vegetable canneries. These earlier regulations have now been superseded by a set of revised regulations, becoming effective June 16, 1917.

The most striking change made by the new orders is the removal of the former limitation upon overtime work. The normal working hours are reduced from 10 per day and 60 per week to 9 per day for 6 days per week. But, on the other hand, unlimited overtime for women is now permitted upon payment of not less than $1\frac{1}{4}$ time for all excess up to 12 hours per day and at not less than double time for all excess over 12 hours. Under the original orders there was an absolute prohibition of overtime lengthening the hours of employment to more than 72 hours per week.

The minimum wage rates as earlier fixed are but very slightly changed in the new orders. The old and new rates are shown in the table following:

¹ California Industrial Welfare Commission, orders Nos. 3 and 4, issued Apr. 16, 1917, in effect June 16, 1917.

	Order of February, 1916.	Order of April, 1917.
<i>Piece rates.</i>		
Cutting, apricots.....	\$0.225 per 100 pounds..	Increased to \$0.25 per 100 pounds.
Cutting, pears.....	\$0.375 per 100 pounds..	No change.
Cutting, cling peaches.....	\$0.225 per 100 pounds..	Do.
Cutting, free peaches.....	\$0.125 per 100 pounds..	Do.
Sorting, asparagus.....	Not covered.....	\$0.13 per 100 pounds.
Cutting, tomatoes.....	\$0.03 per 12 quarts....	No change.
Canning:		
All varieties of fruit, No. 2½ cans.....	\$0.15 per dozen cans...	Do.
All varieties of fruit, No. 10 cans.....	\$0.036 per dozen cans..	Do.
Tomatoes, No. 2½ cans.....	\$0.01 per dozen cans...	Do.
Tomatoes, No. 10 cans.....	\$0.024 per dozen cans..	Do.
<i>Time rates.</i>		
Experienced hands (i. e., experience of over 3 weeks).....	\$0.16 per hour.....	Do.
Inexperienced hands.....	\$0.13 per hour.....	Do.

Thus, 16 cents an hour is made the minimum rate for experienced time workers and is also the minimum hourly sum which, it was estimated, the piece rates agreed upon would produce under ordinary conditions. Provided the normal hours of 54 hours per week are worked, this rate is equivalent to \$8.64 per week. This may be compared with the minimum wage rates for women cannery workers as established in the two other Pacific States—Washington, minimum rate, \$8.90 per week, with no absolute limit upon working hours; Oregon, \$8.64 per week in Portland and \$8.25 in the rest of the State, for a 54-hour week.

As regards sanitary conditions, the new orders slightly extend the requirements of the early order and make some of the requirements more precise. The original regulations have been published in a recent bulletin of this bureau.¹ They are of interest as representing some of the most advanced standards of sanitation for canneries so far put into effect in any of the States.

RECENT COLLECTIVE AGREEMENTS IN VARIOUS EUROPEAN COUNTRIES.

WAGE AGREEMENT OF THE DUTCH FURNITURE TRADE.²

The organ of the General Dutch Furniture Makers' Federation reports that a wage agreement was signed in February, 1917, between the Furniture Manufacturers' Association and the Furniture Makers' Federation. The agreement includes all furniture makers, chair makers, wood carvers, turners, polishers, upholsterers, and

¹ Bulletin 211 of the United States Bureau of Labor Statistics, Labor laws and their administration in the Pacific States, p. 90.

² Bulletin der Internationalen Union Der Holzarbeiter, No. 214, March, 1917. Berlin, 1917, p. 28.

machine workers. The essential provisions of the agreement are the following:

Employers shall be entitled to issue rules and regulations with respect to the performance of the work and the maintenance of order in the establishment. These rules and regulations must not be contrary to the agreement.

Workmen shall be obligated to perform, on demand of the employer, work other than that included in their usual daily tasks, provided such work is connected with the establishment of the employer and within the ability of the workmen.

Workmen shall be held responsible for damage to or loss of tools and materials. They shall not be permitted to work during their leisure hours in their trade for any other employer or for private parties. Employers, on the other hand, shall not be entitled to request workers to perform strike work.

The minimum wage schedule agreed upon provides wage rates for the different branches of the trade according to locality and to the age of the worker, the country having been divided for this purpose into four groups of localities, with three wage classes each. The first group includes Amsterdam, The Hague, and Rotterdam; the second, Haarlem and Utrecht; the third, Groningen and Arnheim; and the fourth, Wageningen.

Workmen 24 years of age and less than 26 make up wage class I; those 26 years of age and less than 28 make up wage class II; those 28 years of age and over form wage class III. The following table illustrates the working of the system:

WAGE AGREEMENT OF THE DUTCH FURNITURE TRADE, EFFECTIVE MAR. 1, 1917, TO FEB. 29, 1920.

Occupation.	Wage class.	Wage rates per hour in local group—			
		I	II	III	IV
		<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Furniture maker, chair makers, turners, machine workers.....	I	11.3	10.9	10.5	10.1
	II	12.1	11.7	11.3	10.9
	III	12.9	12.5	12.1	11.7
Wood carvers.....	I	12.5	12.1	11.7	11.3
	II	12.9	12.5	12.1	11.7
	III	13.7	13.3	12.9	12.5
Polishers.....	I	10.1	9.6	9.2	8.8
	II	10.5	10.1	9.6	9.2
	III	11.3	10.9	10.5	10.1
Upholsterers.....	I	10.5	10.1	9.6	9.2
	II	11.3	10.9	10.5	10.1
	III	12.1	11.7	11.3	10.9

On the date on which the agreement becomes effective all wage rates are increased automatically by 1.2 cents and are made to tally with the above-mentioned classes. On the other hand, no reduction of wages is to result from the new classification. On March 1, 1918,

the wages per hour rise automatically 0.8 cent, and on March 1, 1919, 0.4 cent.

Pieceworkers shall under no condition receive less than the minimum time wage. The wages of time workers performing piecework shall not be reduced to the level of the rate for time-work.

The hours of labor, except in the case of upholsterers, shall be limited to 10 hours per day and 60 hours per week. In the case of upholsterers the hours of labor during March, April, May, and June shall be 11 hours per day, and during the other months, 10 hours per day. The minimum working-day shall be limited to 9 hours. In cases of shorter duration of the work wages are to be paid for 54 hours per week.

In establishments granting a half holiday on Saturday afternoon the working-day may be prolonged by one hour over the hours fixed in the preceding paragraph.

Overtime shall be permitted only in urgent cases. Up to 10 p. m. the men shall be remunerated with an additional rate of 25 per cent; on work from 10 p. m. to 6 a. m. at an additional rate of 50 per cent; for Sunday work the extra pay shall amount to 100 per cent, but no workman shall be bound to work on Sunday. No work shall be performed as a rule on Easter Monday, Ascension Day, Whitmonday, Christmas, and New Year, but wages shall be paid for these holidays if they do not fall on a Sunday. In case work is performed on these days an additional rate of 125 per cent is to be paid. No workman shall be bound to work on these days.

After having worked one year in an establishment workmen shall be entitled to claim an annual leave of three days with full pay. In case of shorter periods of employment one day's leave shall be granted for each four months of employment. This leave is to be granted during the summer months, i. e., between June 1 and September 30.

Disputes arising from this agreement which can not be settled by the executives of the contracting parties shall be submitted to the decision of the local magistrate.

The agreement is to remain in force from March 1, 1917, to February 29, 1920. In case one of the contracting parties desires to terminate or to amend the agreement, notice must be given three months before its expiration. Failing such notice the agreement shall be regarded as having been prolonged for one year.

During the period covered by the agreement the federations and their members bind themselves to abstain from strikes and lockouts for the purpose of altering the terms of the agreement, and to refrain from supporting measures and actions conducted for the same purpose among the members of the contracting federations. They shall

not, however, be held liable for such actions by persons who do not belong to the federations.

WAGE INCREASES FOR WOODWORKERS IN SWEDEN.¹

The Swedish Woodworkers' Federation reports in its paper, "Traarbetaren," that an understanding has been arrived at with the Central Federation of the Employers according to which the wage agreements expiring on April 1, 1917, are prolonged to April 1, 1918. This arrangement had been effected as far back as September 13, 1916, on the occasion of the general negotiations in the building trade, and secured to the woodworkers a considerable wage increase, which took effect from August 18, 1916.

In the following list are given the localities involved in the negotiations together with the agreed wage increases. Of the wage rates shown here those of the carvers and pattern makers of Malmö are particularly conspicuous. Therefore, it should be remarked that these rates relate to two special branches of wood carving.

Pieceworkers receive a corresponding increase of wages. The Woodworkers' Federation likewise succeeded in securing similar improvements for woodworkers in a number of towns not affiliated with the employers' federation.

WAGE SCHEDULE FOR SWEDISH WOODWORKING TRADES EFFECTIVE AUG. 16, 1916, TO APR. 1, 1918.

Locality.	Former wage, per hour.	Wage increase.	Present wage, per hour.	Locality.	Former wage, per hour.	Wage increase.	Present wage, per hour.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>		<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Stockholm:				Borås.....	13.7	1.9	15.6
Joiners.....	16.6	2.7	19.3	Uddevalla.....	13.9	2.7	16.6
Carpenters.....	15.3	2.7	18.0	Lund.....	14.5	1.9	16.4
Norrköping.....	13.4	3.2	16.6	Malmö.....	14.5	1.9	16.4
Eskilstuna.....	13.9	2.7	16.6	Carvers.....	20.6	1.9	22.5
Gavle.....	14.2	2.7	16.9	Pattern makers.....	22.0	1.9	23.9
Vesterås.....	13.9	3.2	17.1	Landskrona.....	14.5	1.9	16.4
Örebro.....	13.4	3.2	16.6	Christianstad.....	12.9	2.7	15.6
Nyköping.....	12.6	3.2	15.8	Helsingborg.....	14.5	1.9	16.4
Södertelge:				Ystad.....	14.5	1.9	16.4
Joiners.....	15.2	2.4	17.6	Eslov.....	13.4	2.4	15.8
Carpenters.....	13.9	3.8	17.7	Kjävlinge:			
Kalmar:				Builder's joiners.....	12.9	2.4	15.3
Joiners.....	12.3	2.7	15.0	Workshop joiners.....	11.5	2.4	13.9
Carpenters.....	11.8	3.2	15.0	Karlskrona.....	12.6	2.7	15.3
Workshop joiners.....	11.5	2.7	14.2	Halmstad.....	13.1	2.4	15.5
Ludvika.....	15.5	1.9	17.4	Skurup.....	12.6	2.7	15.3
Nässjö.....	14.7	1.3	16.0	Hässleholm.....	12.9	2.7	15.6
Gothenburg, woodworkers.....	14.2	2.4	16.6				
	15.3	1.3					

INCREASE IN WAGES IN THE NETHERLANDS DURING THE WAR.

The monthly review issued by the Netherland Bureau of Statistics (*Maandschrift van het Centraal Bureau voor Statistiek*) for March

¹ Bulletin der Internationalen Union Der Holzarbeiter, No. 214, March, 1917. Berlin, 1917, p. 32.

31, 1917, contains an extensive study on wages in which comparable data are given as to wages paid in several principal occupations in various cities. In some of the tables given the increase is shown by comparing the wages paid under the last previous scale, and under that in operation at present. In other cases wages are shown for selected years during the period 1901-1917, while in a few cases wages are shown for 1874.

In the following abstract the data are selected for only a few of the more important cities in the kingdom, from data obtained from the following sources: (1) Collective agreements reported; (2) minimum wages established in contracts awarded by public authorities; (3) wages paid in the four central machine shops belonging to the State-operated railroads; and (4) wages reported paid in the merchant marine.

INCREASE IN WAGES IN BUILDING TRADES OF NETHERLANDS AS FIXED BY COLLECTIVE AGREEMENTS.

Occupation and city.	Previous agreement.		Present agreement.		
	Date.	Hourly wages.	Date.	Hourly wages.	Per cent of increase.
Carpenters: ¹		<i>Cents.</i>		<i>Cents.</i>	
Amsterdam.....	May 1, 1913	13. 27	Nov. 20, 1916	15. 28	15
The Hague.....	May 1, 1914	12. 46	May 1, 1916	14. 07	13
Haarlem.....	May 6, 1912	10. 85	Feb. 21, 1916	11. 66	7
Boxtel.....	Apr. 13, 1914	7. 64	July 17, 1916	8. 84	16
Siddeburen.....	Apr. 1, 1914	7. 64	Mar. 1, 1917	10. 85	42
Bricklayers: ²					
The Hague.....	May 1, 1914	13. 27	May 1, 1916	14. 87	12
Haarlem.....	May 6, 1912	10. 85	Feb. 21, 1916	11. 66	7
Boxtel.....	Apr. 13, 1914	7. 64	July 17, 1916	8. 84	16
Masons' helpers:					
The Hague.....	May 1, 1914	11. 26	May 1, 1916	12. 86	14
Haarlem.....	May 6, 1912	8. 84	Feb. 21, 1916	9. 65	9
Boxtel.....	Apr. 13, 1914	6. 43	July 17, 1916	7. 64	19
Excavators:					
Amsterdam.....	Feb. 1, 1912	12. 06	Feb. 1, 1917	14. 07	17
The Hague.....	May 1, 1914	11. 26	May 1, 1916	³ 12. 86	³ 14
Haarlem.....	Jan. 19, 1914	10. 45	Mar. 27, 1916	11. 26	8
Bussum.....	June 1, 1913	8. 84	June 1, 1916	10. 05	14
Plumbers:					
Amsterdam.....	Mar. 1, 1913	12. 86	Oct. 16, 1916	15. 28	19
Painters:					
Wormerveer.....	Mar. 15, 1914	10. 45	Mar. 15, 1916	11. 26	8
Bussum.....	Jan. 1, 1914	9. 65	Feb. —, 1917	11. 26	17
Groningen.....	Jan. 1, 1913	9. 25	Jan. 8, 1917	11. 66	26
Wreckers:					
Amsterdam.....	May 1, 1913	12. 46	May 1, 1916	14. 47	16
Plasterers:					
The Hague.....	Mar. 1, 1914	12. 06 to 14. 87	Mar. 1, 1917	13. 67 to 17. 29	13 to 16
Boxtel.....	Apr. 13, 1914	8. 04	July 17, 1916	9. 25	15

¹ Average increase for all cities reported to be at least 20 per cent in 1917.

² Average increase for all cities reported to be at least 7 to 8 per cent in 1917.

³ And in addition 10 per cent increase since Aug. 1, 1916.

In the mercantile trade, foods, condiments, etc., the wages in Oss are reported for two classes of employees—steady workers and casual employees. In these classes wages have increased 14 and 21 per cent, respectively, over the contract of February 1, 1914.

Items are shown from several contracts. The table following, as reported for Amsterdam, is a fair index of all.

INCREASE IN WAGES OF BAKERY EMPLOYEES IN AMSTERDAM, 1917 OVER 1913, AS FIXED BY COLLECTIVE AGREEMENTS.

Occupation.	Weekly wages under agreement of May 17, 1913.	Weekly wages under agreement of Jan. 1, 1917.	Per cent of increase.
Master workmen.....	\$6.42	\$8.64	34
Dough makers.....	6.03	7.04	17
Oven tenders.....	6.03	7.44	23
Bench workers and other skilled hands.....	5.63	6.63	18
Apprentices.....	\$2.01 to 5.03		
Deliverers:			
Morning.....	¹ 1.61	¹ 2.11	
Evening.....	¹ 2.81	¹ 3.42	
Entire day.....	4.82	6.03	25

¹ Plus 2 per cent on sales.

Wages paid farm and garden laborers have sharply advanced since the first half of 1914. The following wages reported for Woldendorp are here given as indicating the extent of rise in wages on farms:

INCREASE IN WAGES OF AGRICULTURAL LABORERS (MEN) IN WOLDENDORP, 1916 OVER 1914.

Season.	Rate per hour (cents).		Per cent of increase.
	1914	1916	
May 1 to Aug. 1.....	6.03	¹ 6.03	17
Aug. 1 to Nov. 1.....	6.03	¹ 7.04	33
Nov. 1 to Dec. 1.....	6.03	¹ 6.03	17
Dec. 1 to Mar. 15.....	5.03	¹ 6.03	² 40
Mar. 15 to Apr. 1.....	5.03		
Do.....	6.03	¹ 6.03	17
Apr. 1 to May 1.....	6.03	¹ 6.03	17
Plowing (exclusive of noon meal).....	³ 60.30	³ 80.40	33
Other laborers.....	³ 59.30	³ 70.35	40

¹ Exclusive of 2½ cents allowance per hour.

² Including allowance.

³ Rate per day.

Women helping in harvesting were paid 4.02 cents per hour in 1914 and 6.03 cents per hour in 1916, if provided with midday meal; when not provided with midday meal, an allowance was made of 10.05 cents per day in 1914 and 14.07 cents per day in 1916. The increase is 50 per cent in the first and 40 per cent in the second instance.

Seamen's monthly wages are reported under two heads, but as the rate of increase varies but little, only the rates reported by the Lloyd service are reproduced here.

INCREASE IN WAGES OF SEAMEN IN NETHERLANDS, 1916 OVER 1912.

Occupation.	Monthly wages of seamen reported by Lloyd service.				Per cent of increase.
	Freight service.		Mail service.		
	1912	1916	1912	1916	
Seamen.....	\$15.28	\$19.30	\$16.08	\$20.10	26, 25
Stokers.....	18.49	22.51	18.49	22.51	22
Trimmers.....	14.87	18.09	14.87	18.09	22
Quartermasters.....			17.69	21.71	23
Lamp men.....			17.29	21.31	23
Donkey-engine men.....	20.50	24.52	20.50	24.52	20
Storekeepers.....	19.30	23.32	19.30	23.32	21
Others.....	19.30	23.32	19.30	23.32	21
Boatswains.....	\$24.12-28.14	\$26.13-30.15	\$24.12-28.14	\$26.13-30.15	7-8
Carpenters.....	24.12-28.14	26.13-30.15	24.12-28.14	26.13-30.15	7-8

Minimum wages stipulated in contracts awarded for public works are reported for various trades and occupations from which the following in canal work in four Provinces are selected as representative wages:

INCREASE IN WAGES OF CANAL WORKERS IN NETHERLANDS, 1916 OVER 1913.

Occupation.	Wages per hour.											
	North Zealand.			South Bereland.			Vlissingen to Middelburg.			Middelburg to Veere.		
	1913	1916	Per cent of increase.	1913	1916	Per cent of increase.	1913	1916	Per cent of increase.	1913	1916	Per cent of increase.
Carpenters.....	Cents. 8.04	Cents. 10.45	30	Cents. 8.04	Cents. 8.84	10	Cents. 9.25	Cents. 10.45	13	Cents. 8.44	Cents. 9.65	14
Bricklayers.....	8.84	11.26	27	8.04	8.84	10	9.65	10.85	12	8.84	10.05	14
Painters.....	8.84	11.26	27	7.24	8.04	11						
Stonecutters.....	10.45	12.06	15	10.05	10.05	0	10.05	11.26	12	10.05	11.26	12
Smiths.....	8.04	10.45	30	8.04	8.84	10	9.25	10.45	13	8.44	9.65	14
Molders, bench.....	11.26	13.27	18				10.45	14.07	35	10.45	14.07	35
Zinc workers.....							9.25	10.45	13	8.44	9.65	14
Street (road) makers.....	8.04	9.65	20				9.25	10.45	13	8.44	9.65	14
Laborers.....	7.24	8.04	11	6.43	7.24	12	7.24	8.84	22	6.83	8.44	24
Stone setters.....	8.04	9.65	20	7.24	8.04	11	8.04	10.45	30	8.04	9.65	20

¹ Concrete workers.

The following table shows the wages per hour paid mechanics and laborers in Government-owned railway shops in 1913 and 1917, and the per cent of increase, January, 1917, over January, 1913:

INCREASE IN WAGES IN FOUR STATE-OPERATED RAILWAY SHOPS OF NETHERLANDS, JANUARY, 1917, OVER JANUARY, 1913.

Occupation.	Wages per hour.											
	Utrecht.			Tilburg.			Zwolle.			Blerik.		
	January—		Per cent of increase.	January—		Per cent of increase.	January—		Per cent of increase.	January—		Per cent of increase.
	1913	1917		1913	1917		1913	1917		1913	1917	
	<i>Cents.</i>	<i>Cents.</i>		<i>Cents.</i>	<i>Cents.</i>		<i>Cents.</i>	<i>Cents.</i>		<i>Cents.</i>	<i>Cents.</i>	
Machinists ¹	9.65	10.05	4	9.65	10.85	12	8.44	9.45	12	.....	.....
Polishers.....	8.04	9.45	17	7.64	9.05	18	8.04	9.05	12	.....	.....
Turners.....	9.85	10.45	6	8.84	10.45	18	9.45	10.25	9	.....	.....
Drillers.....	.....	.....	.....	8.64	9.85	14	8.84	10.25	16	.....	.....
Wheel turners.....	9.05	10.45	16	8.84	10.25	16	8.44	9.85	17	.....	.....
Coppersmiths.....	9.65	11.26	² 17	9.45	11.06	17	8.44	9.45	12	.....	.....
Copper molders ³.....	.....	.....	.....	9.65	10.85	12	.....	.....	.....	.....	.....
Boiler makers.....	9.05	10.85	20	9.45	11.26	19	9.05	10.05	11	.....	.....
Forgers.....	10.65	11.46	8	11.06	12.06	9	10.85	12.26	13	.....	.....
Hammermen (forgers' helpers).....	8.64	9.45	9	7.84	7.84	.....	8.24	8.84	7	.....	.....
Car makers ¹	8.24	9.25	12	9.05	11.26	24	8.24	10.05	22	8.64	11.06	
Car assemblers.....	9.45	11.46	21	9.65	11.46	19	8.44	10.45	24	9.45	11.06	
Joiners.....	8.84	11.06	25	8.84	11.06	25	9.25	10.45	13	.....	.....
Carpenters (car builders).....	9.85	11.26	14	8.84	11.06	25	9.05	11.06	22	9.65	11.46	
Sawyers.....	.....	.....	.....	10.25	10.85	6	9.05	11.86	31	.....	.....
Painters, decorators.....	9.85	12.06	22	9.45	11.26	19	9.25	11.26	22	8.84	11.06	
Cushion makers.....	9.45	10.85	15	8.64	10.85	26	9.45	10.25	9	.....	.....
Laborers.....	7.24	8.04	11	6.23	8.24	32	7.44	8.44	14	.....	.....

¹ Locomotive bench hands.

² Including tinsmiths.

³ Foundrymen.

FOOD CONSERVATION THROUGH COOPERATION OF VOLUNTEER FORCES.

Under date of June 12 President Wilson issued an order directing Herbert C. Hoover, United States food administrator, to proceed with the organization of the new food administration so far as it relates to the conservation of food and the elimination of waste through cooperation of volunteer forces. Following is the text of the President's letter to Mr. Hoover:¹

It seems to me that the inauguration of that portion of the plan for food administration which contemplates a national mobilization of the great voluntary forces of the country which are ready to work toward saving food and eliminating waste admits of no further delay.

The approaching harvesting, the immediate necessity for wise use and saving, not only in food but in all other expenditures, the many undirected and overlapping efforts being made toward this end, all press for national direction and inspiration. While it would in many ways be desirable to wait complete legislation establishing the food administration, it appears to me that so far as voluntary effort can be assembled we should not wait any longer, and therefore I would be very glad if you would proceed in these directions at once.

The women of the Nation are already earnestly seeking to do their part in this our greatest struggle for the maintenance of our national ideals, and in no direction can they so greatly assist as by enlisting in the service of the food administration and cheerfully accepting its direction and advice. By so

¹ From the Official Bulletin, Washington, D. C., July 18, 1917.

doing they will increase the surplus of food available for our own Army and for the export to the Allies. To provide adequate supplies for the coming year is of absolutely vital importance to the conduct of the war, and without a very conscientious elimination of waste and very strict economy in our food consumption we can not hope to fulfill this primary duty.

I trust, therefore, that the women of the country will not only respond to your appeal and accept the pledge to the food administration which you are proposing, but that all men also who are engaged in the personal distribution of foods will cooperate with the same earnestness and in the same spirit. I give you full authority to undertake any steps necessary for the proper organization and stimulation of their efforts.

GOVERNMENT CONTROL OF FOOD SUPPLIES IN GERMANY.

FURTHER REDUCTION OF POTATO RATION.

According to a cable by the Associated Press, dated May 19, 1917,¹ the potato situation in Germany apparently is growing steadily worse, although the weather no longer furnishes an excuse for the scanty shipments. Following the example of its sister city Altona, Hamburg has reduced the weekly ration to 24 ounces, substituting an allowance of 640 grams (1.41 pounds) of bread for the rest of the promised 5 pounds of potatoes. To meet the dissatisfaction which this state of affairs produced the Government has authorized grocers to sell all their remaining stocks of canned vegetables.

The Berlin potato ration is being maintained, although with great difficulty, because of the moral effect of reducing at the capital the allowance promised definitely after the April strike. In a remarkably worded official appeal the people of Berlin are implored to remember that the eyes of the world are upon them; they are admonished to cease complaining and to recognize how much better conditions are in Berlin than in the war-ravaged enemy lands of the British Isles which, the appeal states, are headed toward actual starvation.

Simultaneously there were published official arrangements for a race between time and famine, which show how perilously scant is the margin of safety under the most favorable conditions between the moment when the present stock is exhausted and the time in which flour will be available. These plans provide for selection of the region where the crops will ripen first under climatic conditions, to which reapers, thrashing machines, and military workers will be sent. All arrangements have been made for rushing this grain to the mills.

LARGE SUPPLY OF FISH.²

Germany is at the present time rejoicing in an oversupply of fish, owing to unusually large catches in the waters of the Baltic Sea and to

¹The Evening Star. Washington, D. C., May 19, 1917.

²Milwaukee Sentinel, June 2, 1917.

heavy imports. The population is being implored by the newspapers to use more fish, which is now obtainable without a card and is selling below the legal maximum price. The army too is oversupplied with fish, and the smoking establishments have more on hand than they can preserve. Fish dealers in Denmark have been notified to limit or discontinue temporarily shipments of fish.

PROTEST OF BAVARIAN FARMERS AGAINST THE MISMANAGEMENT OF THE FOOD PROGRAM.¹

The Bavarian Christian Farmers' Association held an important meeting at Regensburg recently to protest against the mismanagement of the food supply, especially in the matter of meat. The meeting was attended by 20 members of the Reichstag and the Diet. The food dictator, Von Batocki, was violently attacked and was also held to be responsible for the scarcity of beer. It was stated that where the general administration had interfered things were at their worst.

The farmers insist that the price of meat must be raised, as, in contract to the great industrial establishments, the farmers are making no profits.

CONFERENCE IN PRUSSIA ON FOOD SUPPLY.²

It is officially stated in the Berlin press that at a conference in the Prussian House of Lords at which members of the various Government departments were present it was decided that there was complete assurance of a food supply sufficient to enable the country to hold out for the remainder of the crop year. The conference was held under the presidency of the minister of the interior. All problems connected with the matter of public feeding were thoroughly discussed. The conferees formulated regulations for the crop year 1917-18 and considered all possibilities of food distribution. Their conclusions were reached after a complete survey of existing conditions.

COMPULSORY FARM LABOR.³

The general in command of the Second Army Corps, whose headquarters are in Stettin, has proclaimed that soldiers' wives in receipt of war relief must do at least half a day's work on the land every day, provided they are physically able to do so and their general circumstances permit it. In the event of their refusal the district presidents (*Landräte*) are to decide as to whether the continuance of their maintenance grant is necessary, and if a serious reminder of their duty remains without effect the grant made them for the maintenance of their family is to be wholly or partially withdrawn. The general has also appealed to the district presidents to prevail upon foremen,

¹ The Sunday Star, Washington, D. C., June 2, 1917.

² New York Post, June 6, 1917.

³ Christian Science Monitor, Boston, May 11, 22, 31, 1917.

district commissioners, and so on, to see that no men and women suitable for agricultural labor by reason of their strength and their abilities evade such work. Cases of public resistance, he announces, are to be brought to his notice.

The chief commander of the Marches has published a decree with regard to the work on the land and the forests throughout Brandenburg. The men and women already engaged in such work are forbidden to enter any other employment without the written consent of a magistrate, while those people in rural districts who have so far not engaged in work of any kind must also take up no other work than that on the land or in the forests unless they obtain written permission to do so, and this permission will be given only when the work desired is not considered prejudicial to the promotion of agricultural production.

The decree further renders it compulsory for all men and women to undertake agricultural work at the usual rate of payment in their home or a neighboring district if called upon to do so and if the matter can be arranged without any great detriment to their private affairs. The provision applies to work on Sundays as well as on week days. The necessary summonses are to be issued in every case by a magistrate, and only in the event of imperative necessity, such as may arise in connection with the sowing or reaping of crops, etc. Failure to comply with the decree will be punishable by imprisonment for one year, while minor offenses may incur arrest or a fine of 1,500 marks (\$357).

The Bavarian War Office has published a decree to the effect that people not liable to auxiliary service must not be engaged by industrial concerns nor as domestic servants unless they have worked on the land for six weeks during the preceding 12 months. Similarly, employees already engaged who have not fulfilled these conditions are to be dismissed. The order is stated to be chiefly directed against country girls engaged in domestic service in the towns.

PRUSSIAN CHILDREN SENT TO FARMS.¹

The German newspapers devote much space to a description of the departure of nearly 1,000 children from Berlin to the villages and farmhouses of East Prussia. The children will be put as far as possible on light farm work while they are regaining health and strength under the stimulation of more plentiful farm food. Committees which have been collecting funds for some time have made arrangements with country people who are willing to take city children for periods varying from one to four months. School

¹ Milwaukee Sentinel, June 2, 1917.

authorities repeatedly have asserted that undernutrition is seriously interfering with the work in the schools, and statistics gathered by medical supervisors show a steadily decreasing standard of weight and growth in pupils.

GOVERNMENT CONTROL OF FOOD SUPPLIES IN GREAT BRITAIN.

THE FOOD SUPPLY OF GREAT BRITAIN.

At the request of the president of the Board of Trade a committee of the Royal Society has drawn up a report on the food supply of the United Kingdom which has been published recently.¹ This report consists of three parts: Part I deals with the food supply in the period before the war (1909-1913); Part II gives a survey of the food supply at the present period of the war (1916); Part III suggests possible methods of economizing the available food supply.

The problem dealt with in the report is partly statistical and partly physiological. It is statistical because it is necessary first to ascertain as precisely as possible the quantities of the several foods available for human consumption in the United Kingdom; it is physiological because it has been necessary to determine the adequacy of the available supply for the sustenance of the nation. This depends upon, (1) the nutritive value of the several foods; (2) the standard requirements of the normal adult male as regards each of the constituents of food requisite for healthy activity; (3) the needs, in proportion to that standard, of women and children.

The quantities of the several food materials available for consumption in the United Kingdom in the five years preceding the war (1909-1913) are set forth in the report in appended tables which also show the quantities and proportions of home-grown and imported foodstuffs. As agricultural statistics are admittedly liable to error, these quantities have been estimated, based on the annual crop reports and on the results of the first census of production (1908) combined with more recent information as to the progress of particular food-producing industries.

The committee then proceeded to calculate the amount of protein, fat, and carbohydrates contained in the given foods and their total energy value. The results of this calculation are shown in the following table:

¹ Great Britain. Board of Trade: The food supply of the United Kingdom. A report drawn up by a committee of the Royal Society at the request of the president of the Board of Trade. London, 1917. 35 pp.

QUANTITIES (IN METRIC TONS) OF FOOD MATERIALS IMPORTED (NET) AND HOME-PRODUCED, AND THE AMOUNT OF PROTEIN, FAT, AND CARBOHYDRATE THEREIN, BEING THE AVERAGE FOR 1909-1913, INCLUSIVE.

[The average of population is taken as having been 45,200,000. The numbers in this table express, in metric tons (1,000 kilos=2,205 pounds approximately), the average quantities per annum for the five years 1909-1913. Based upon quantities supplied by the Board of Trade.]

Food material.	Amount (metric tons).	Protein (metric tons).	Fat (metric tons).	Carbo- hydrate (metric tons).	Energy value (millions of calories).
Cereals.....	4,865,000	549,000	63,000	3,628,000	17,712,000
Meat.....	2,685,000	356,000	799,000	.....	8,890,000
Poultry and eggs, game and rabbits.....	331,000	42,000	31,000	.....	461,000
Fish.....	848,400	91,000	17,000	(¹)	531,000
Dairy produce (including lard and margarine).....	5,231,800	199,000	686,000	258,000	8,253,000
Fruit.....	1,271,000	9,000	14,000	222,000	1,077,000
Vegetables.....	5,482,000	120,000	10,000	1,031,000	4,812,000
Sugar, including cocoa and chocolate.....	1,657,000	5,000	18,000	1,572,000	6,633,000
Cottage and farm produce not included above.....	.....	67,000	13,000	551,000	2,655,000
Total.....	.....	1,438,000 <i>Grams.</i>	1,651,000 <i>Grams.</i>	7,262,000 <i>Grams.</i>	51,024,000 <i>Calories.</i>
Per head per day.....	.....	87	100	440	3,099
Per "man" per day.....	.....	113	130	571	4,001

¹ Negligible quantity.

In the calculation of the data shown in the preceding table the committee has followed in the main the values given by Atwater,¹ multiplied in accordance with the special characteristics of the British supply. In addition the committee has had prepared an independent table by Prof. W. H. Thompson, who has employed different methods of estimating the quantities for which exact statistical information is not available. The two tables differ somewhat in detail but the totals are closely in agreement.

A full consideration of the dietary requirements of a nation for the most part engaged in active work has convinced the committee that these requirements can not be satisfactorily met on a less supply in the food as purchased than 100 grams of protein, 100 grams of fat, and 500 grams of carbohydrate, equal approximately to 3,400 calories per "man" per day, a "man" being an average workman doing an average day's work. The committee has adopted this as their minimum standard. It should be noted that these figures refer to total food constituents as purchased and not to digestible constituents as in the Eltzbacher estimate for the German population. Moreover, it should be remembered that fats and carbohydrates are interchangeable to a limited extent.

The population of the United Kingdom has been taken as 45,200,000. Generally speaking, a woman or child requires less food than a man, i. e., has a man value less than unity. To convert the population of men, women, and children into units, or "men" as

¹ Bulletin No. 28, U. S. Department of Agriculture, The Chemical Composition of American Food Materials, revised edition. Washington, 1900.

defined above, the total number must be reduced by 23 per cent. In reckoning diet for 100 men, women, and children it was estimated that they represented 77 units, that is to say "men." The committee comes to the conclusion that the supply has not only met the requirements of Great Britain in the past but has also provided a margin of waste. The calculations of the committee, based on the minimum physiological standard given above, was that there has been either wasted or consumed in excess of requirements, of proteins 11 to 14 per cent, of fats 25 to 30 per cent, of carbohydrates 10 to 14 per cent.

In Part II of the report the committee attempts to show the distribution of food at the present period of the war (1916) on the assumption that the prewar supply is maintained. For this purpose the committee estimates the total population at 46,500,000, including the fighting forces at home and abroad and the refugees and prisoners in Great Britain, and states that this is probably a low estimate. Calculated on the man values adopted by the committee, this is equivalent to 35,800,000 "men." The condition of war involves a redistribution of food into two shares, (1) for military and naval establishments and (2) for the civilian population. For this purpose the committee has assumed the former to be 4,000,000—2,000,000 on home service and 2,000,000 in the field. This leaves a civilian population of 42,500,000, equivalent to 31,100,000 "men." The distribution of food during 1916 on the basis of a supply equal to that of 1909-1913 is shown in the following table:

TOTAL AMOUNT OF FOOD AVAILABLE IN METRIC TONS PER YEAR AND THE AMOUNT OF FOOD PER "MAN" PER DAY IN GRAMS AT THE PRESENT TIME COMPARED WITH THAT IN 1909-1913.

	1909-1913		1916 (population 46.5 million at 0.77 man value=35.8 million "men")			
			Military (4 million).		Civil (35.8-4=31.8 million "men").	
	Total (metric tons).	Per "man" per day (grams).	Total (metric tons).	Per "man" per day (grams).	Total (metric tons).	Per "man" per day (grams).
Protein.....	1,438,000	113	204,400	140	1,233,600	106
Fat.....	1,651,000	130	262,800	180	1,388,200	120
Carbohydrates.....	7,262,000	571	730,000	500	6,532,000	563
Calories.....		4,009		4,300		3,859

The preceding table shows that on the prewar basis of supply the food available for the civilian population would be more than sufficient both as regards the supply of protein and of energy.

The report states that the needs of the armies, the decreased yield of the harvests at home in 1916, and possible interference with supplies from abroad may reduce the supply in the future below the level shown in the above table; that up to the present the supply of

food has provided a general margin of about 5 per cent above the minimum necessary for proper nutrition and rather more as regards the supply of energy, so that a reduction to this extent would still furnish amounts of the essential food constituents conforming to the standard adopted in Part I of the report.

The report further emphasizes that while the supply of food has up to the present been adequate for the support of the population, the rise in prices has accentuated the inequalities of distribution, which have reduced the daily ration of many below the level of efficiency. Any curtailment of the supplies, even to a limited extent, would result in the poorer classes obtaining less than is needful for safety should the distribution remain unorganized. The committee, as physiologists, lay stress on the fact that in buying food the laboring population is buying energy—the power to work. If the rising prices curtail for any class of the community its accustomed supply of food, its output of work will of necessity be reduced.

In Part III the committee presents a number of suggestions for the increase of the available food supply of the nation. In making these suggestions the committee has limited itself strictly to physiological considerations without touching upon the important economic, social, and other questions which are involved. The suggestions are dealt with under the following heads:

- (1) The possibility of a better recovery of flour in milling.
- (2) An increased economy in meat production.
- (3) An increase in the protein available for human consumption by an increase in the manufacture of cheese, if need be at the expense of butter making.
- (4) The use for food of materials at present employed in brewing and distilling.
- (5) The diversion of a certain quantity of material now used for stock feeding, to human food.

As the report of the committee was submitted at the end of 1916, most of these suggestions have already been acted upon by the Government.

NEW FLOUR AND BREAD ORDER.¹

Under date of April 4, 1917, the food controller issued an order which increases the percentage of flour from other cereals to be mixed with wheaten flour (see MONTHLY REVIEW, June, 1917, p. 929) from a maximum of 15 per cent to a maximum of 25 per cent and from a minimum of 5 per cent to a minimum of 10 per cent. This order is known as "Manufacture of flour and bread order (No. 3), 1917," and amends article 3A of the Manufacture of flour and bread order (No. 2), 1917.

¹ Great Britain: Statutory Rules and Orders, 1917, No. 315 (Cd. 8543).

In connection with this it should be stated that on the date of May 3, 1917, the King signed a proclamation enjoining abstention from all unnecessary consumption of grain.¹

After urging those who had means to procure articles of food other than meat and corn to practice the greatest economy and frugality in the use of species of grain and wheat, the proclamation goes on to urge the heads of households to reduce the consumption of bread in their families by at least one-fourth of the quantity consumed in ordinary times. The proclamation further urges the people to abstain from the use of flour in pastry and to restrict or abandon the use thereof in all other articles than bread. It also exhorts against the practice of feeding horses oats or other grain except where licenses are given in the national interest.

PRESENT GRAIN SUPPLY OF GREAT BRITAIN.

Great Britain's losses in cereal ships have been only 6 per cent, according to a statement made on June 1, 1917, to the Associated Press by Kenneth E. Jones, director of food economy.² The Ministry of Food, he added, had made allowance for the loss of 25 per cent. When the ministry took account of stock at the end of March, Mr. Jones said, it appeared that Great Britain would reach harvest time with only three weeks' supply of cereals on hand. The outlook is now much brighter on account of the success of voluntary rationing and the great reduction of submarine losses and it is indicated that there will be a supply for 12 weeks at the harvest period provided the present imports are continued.

ORDER FOR RESTRICTING THE MANUFACTURE OF MALT.³

An order issued by the food controller under date of April 12, 1917, and known as the "Malt (restriction) No. 2 order, 1917," makes it illegal except under license to manufacture any further malt to sell or to deliver malt or for anyone other than a person brewing beer for sale to sell malt for any purpose. The effect of this order is to prevent home brewing and it will apply also to the manufacture of any nonalcoholic liquor containing malt.

GOVERNMENT CONTROL OF FLOUR MILLS.⁴

In exercise of the powers conferred upon him by Regulation 2GG, the food controller on April 20, 1917, issued an order known as "Flour mills order, 1917," announcing that beginning with April 30,

¹ Christian Science Monitor, Boston, May 3, 1917.

² Chicago Tribune, June 1, 1917.

³ Great Britain: Statutory Rules and Orders, 1917, No. 345 (Cd. 8547).

⁴ Great Britain: Statutory Rules and Orders, 1917, No. 377.

1917, he would take over all flour mills in the United Kingdom which up to the date of the order used any wheat in the making of flour except mills the output capacity of which is less than 5 sacks of flour per hour.

REGULATION OF THE MANUFACTURE AND SALE OF CAKE AND PASTRIES.¹

An order known as the "Cake and pastry order, 1917," was issued by the food controller, April 18, 1917, prohibiting after April 21 the making, and after April 24, 1917, the selling or offering for sale of all pastries, including muffins, crumpets, tea cakes, and all similar articles of food. No ornamental cakes are to be made, nor may any edible substance be added to the exterior of the cake mixture or dough after it has been mixed, or to the article during the process of or after baking. The manufacture of cakes, buns, scones, and biscuits is still permitted, but they must contain only certain specified quantities of wheat, flour, and sugar. Cakes may contain 30 per cent of wheat and flour and 15 per cent of sugar. In the case of buns the specified allowance is 50 per cent of wheat and flour and 10 per cent of sugar. Scones may not contain any sugar at all and only 50 per cent of wheat and flour. Biscuits shall not contain more than 15 per cent of sugar.

The order also rations all shops and places of public refreshment in none of which may any customer be served with more than 2 ounces of bread, cake, buns, scones, or biscuit between the hours of 3 p. m. and 6 p. m. The only exception to this rule is in the case of those public eating places in which no customer is charged more than 6d. (12.2 cents), including the charge for beverages, for any meal not containing meat, fish, or eggs, that is served between the hours of 3 p. m. and 6 p. m., providing notice to that effect is displayed in a prominent place.

RESTRICTION OF THE USE OF WHEAT, RYE, AND RICE.²

By the Wheat, rye, and rice (restriction) order, 1917, dated April 20, 1917, the food controller prohibits the use of wheat or rye except for the purpose of seed or the manufacture of flour, and prohibits the use of rice, and flour obtained from wheat, rye, or rice from being used after April 28, 1917, except for making articles suitable for and to be used only for human consumption. From the same date none of the cereals mentioned must be so treated as to be rendered less fit for the purposes for which they are reserved under the order, and further provision prohibits the waste of any of the flours mentioned or of any article containing such flours.

The Waste of wheat order, 1916, and the Wheat (restriction) order, 1917, are superseded by this order and are revoked.

¹ Great Britain: Statutory Rules and Orders, 1917, No. 372 (Cd. 8552).

² Great Britain: Statutory Rules and Orders, 1917, No. 376 (Cd. 8553).

RESTRICTION ON THE OUTPUT AND DELIVERY OF BEER, WINE, AND SPIRITS.¹

In pursuance of the powers conferred on him by Regulation 2F of the Defense of the Realm Regulations the food controller on the date of March 29, 1917, issued an order entitled "Intoxicating liquor (output and delivery) order, 1917," by which the total annual output of beer in the United Kingdom is limited to 10,000,000 barrels as compared with 26,000,000 barrels allowed for the year ended March 31, 1916. The order provides that no person brewing beer for sale can brew at his brewery any more than the maximum barrelage for the quarter as determined under this order. The maximum barrelage shall be determined in the same manner as under the Output of Beer (Restriction) Act, 1916, except that in ascertaining the standard barrelage under subsection (2) of section 2 of that act, 66 $\frac{2}{3}$ per cent shall be substituted as the amount of reduction where 15 per cent is under that provision the amount of reduction, and 72 per cent shall be substituted as the amount of reduction where 30 per cent is under that provision the amount of reduction.

In certain circumstances the commissioners of customs and excise may authorize the transfer of barrelage from one brewer to another. The order further provides that no wine or spirits shall be delivered from ship's side or a warehouse for home consumption on payment of duty to any person, (a) unless he is the holder of an authority for the time being in force under this provision, (b) in excess of the amount which is authorized to be delivered to him under that authority; and (c) unless particulars as to the warehouse or place from which the wine or spirits are delivered, and of the amount delivered and of the date of delivery are entered on the authority for delivery.

Authorities for the purposes of this provision shall be issued by the commissioners in such manner and subject to such conditions as may be prescribed by rules made for the purpose by the treasury, and the commissioners shall attach to any authority so issued such conditions as they think fit for insuring the proper distribution of the wine or spirits authorized to be delivered.

The rules made by the treasury may provide for the appointment of a committee for the purpose of advising and assisting the commissioners in the performance of their duties and the exercise of their powers under this part of this order.

Authority shall (except in cases where special directions are given by the commissioners) be granted only to persons to whom or on whose behalf wine or spirits were delivered during the year 1916, and so that the total amount delivered to that person during the

¹ Great Britain: Statutory Rules and Orders, 1917, No. 270 (Cd. 8538).

year beginning on the 1st day of April shall not exceed the amount delivered to that person during the year 1916 reduced by 50 per cent.

The order does not apply to delivery of spirits in cases in which the commissioners are satisfied that the spirits are delivered to a manufacturing chemist, or to a manufacturer of perfumes for use in their manufactures, or are delivered for scientific purposes or for medical purposes. If it is shown to the commissioners that any condition attached by them in the issue of an authority under this order has not been complied with, the commissioners may, if they think fit, withdraw the authority, but the powers of the commissioners to withdraw the authority shall not prejudice the liability of the holder of the authority to any penalty to which he may be liable for not complying with the condition. Infringements of the order are summary offenses subject to penalties under the Defense of the Realm Regulations.

ORDER AGAINST FOOD HOARDING.¹

The long expected "Food hoarding order" was issued by the food controller on April 5, 1917. It is the aim of the order to prevent those who in ignorance or unscrupulousness would be disposed to make large purchases of food to hold against a possible lean time from taking this advantage of their fellow citizens. The mere threat of this order had important results, checking food hoarding at once. On the other hand, it has caused considerable irritation in many quarters on account of the plan of domiciliary search by policemen. This latter possibility was thoroughly ventilated in Parliament, however, and the order makes it clear that only persons specially authorized in writing by the food controller will be given this power of search.

The new order forbids anyone—except under the authority of the food controller—to acquire after April 9 any article of food to such an amount as to exceed the amount required for ordinary use and consumption in the households or establishments, and in any proceedings for breach of this clause the burden of showing what quantity of any article of food is required will rest upon the person charged. Conversely no person may sell any article to a purchaser where he has grounds for believing, in view of the quantity demanded or for any other reason, that the purchase would increase the customer's holding of the article of food in question above what he and his household are lawfully entitled to.

Any person specially authorized in writing by the food controller may enter upon any premises in which he has reason to believe that any article of food is being kept in contravention of this order and

¹ Great Britain: Statutory Rules and Orders, 1917, No. 317 (Cd. 8542), and Christian Science Monitor, Boston, May 17, 1917.

carry out such inspection and examination of the premises as he may think necessary. The present order does not apply to (a) any article of food required or held in ordinary course of business by any producer, dealer, or manufacturer, and (b) any home-produced or home-made article of food in the possession of the producer or maker or the materials reasonably necessary in the ordinary course for such production.

The order covers every article used for human food and those articles which enter into the composition or preparation of human food. Any person guilty of acting in contravention of this order or evading or abetting such acts will be guilty of a summary offense against the Defense of the Realm Regulations and the directors or officers of any company which so acts will be held individually guilty of a summary offense unless they can prove that the contravention took place without their knowledge or consent.

REGULATIONS FOR THE SALE OF TEA.¹

Under date of April 5, 1917, the food controller has issued a so-called "Tea (net weight) order, 1917," under which after July 1, 1917, tea sold at retail in quantities of 2 ounces or more must be sold by net weight and in ounces or pounds or multiples of ounces or pounds, and after the same date if any weight is stated on any package of tea the weight stated must be the true net weight. After May 1, 1917, it is made unlawful by the order to affix any statement as to weight to any package of tea except the true net weight.

MAXIMUM PRICES FOR SEED POTATOES.²

By the "Seed potatoes (prices) order (No. 2), 1917," dated April 3, 1917, the existing provisions relating to seed potatoes were extended by the food controller until the end of April. The prices chargeable for seed potatoes are also raised by £2 (\$9.73) per ton and seed potatoes are now defined as meaning any potatoes which will not pass through a riddle having a 1-inch mesh and will pass through a riddle having a 2-inch mesh.

ESTABLISHMENT OF COMMUNAL KITCHENS.³

Liverpool is now considering the question of following the example of several other cities in England and Ireland, such as Bradford and Dublin, in establishing communal kitchens to meet the difficulties arising from the present restrictions with regard to the purchase and

¹ Great Britain: Statutory Rules and Orders, 1917, No. 318 (Cd. 8545).

² Great Britain: Statutory Rules and Orders, 1917, No. 295 (Cd. 8539).

³ Christian Science Monitor, Boston, May 29, 1917.

preparation of food. These kitchens are in no way charitable institutions, but simply common cooking centers at which those who so desire may obtain their food ready cooked to take home with them, with a minimum of expenditure of money, fuel, labor, and trouble. Similar experiments have been tried in the past, notably in France, with great success.

Liverpool has ready at hand a number of sources of supply for the equipment of several of these centers. It has been proposed that use might be made of the large steam cooking pans on board some of the big American liners which are not at present being used for carrying passengers, and which might be temporarily brought ashore. There are three poor-law institutions with a surplus of cooking accommodation at certain times of day. It has been estimated that between 12,000 and 15,000 meals might be supplied daily from them on the communal kitchen basis. Similar use might be made of the kitchens in the various hospitals in the city, without interfering with the patients' meals. The kitchens supplying meals for school children under the education committee and some in the artisan dwellings under the control of the housing committee might also, it has been proposed, be used in addition for the purposes of the communal kitchens, if the scheme is carefully organized.

FOOD POLICY FRAMED BY NATIONAL COMMITTEE OF BRITISH WORKERS.¹

Under date of May 15, 1917, a manifesto, embodying a comprehensive policy on the question of the food supply, has been drawn up by the War Emergency Workers' National Committee, and has been submitted to the various sections of the Labor, Cooperative, and Industrial Women's Movement.

It is suggested that the Government should purchase all essential imported foodstuffs and commandeer or control all home-grown products (including potatoes) and place them on the market at prices which will secure to the consumer the full benefit of Government action. Proportional regulation, on a family basis, of foodstuffs in which there is a shortage and a 6d. quartern loaf during the war and for six months afterwards are also advocated, any loss to be met out of war funds. The manifesto is in the following terms:

The Workers' National Committee has had under consideration the present and contemplated state of national food supply. Ever since the beginning of the war the national committee has continually put forward suggestions in the direction of adequate organization by the State in order to secure not only as ample a production

¹The Journal of Commerce, New York, June 4, 1917.

of national foodstuffs as war circumstances allow, but also their equitable distribution among the various classes of the nation. For many months our representations were repudiated by responsible ministers as unnecessary and revolutionary, but, with the passage of time and the growing scarcity of supplies, measures have been and are being tardily adopted with a view to achieving the objects we have constantly had in mind.

The development of the submarine campaign has now accentuated the whole problem and has given acute emphasis to our past proposals. It is evident from inspired statements in the public press that the situation is increasing in gravity, but the responsible departments of the Government do not yet seem to be inspired by the extreme urgency of the problem.

It has been suggested that machinery to secure an equitable distribution of sugar has been prepared, but that the complications and labor involved in its administration prevent its immediate adoption. Valuable time is being allowed to lapse, while the problem is becoming more serious than ever. The real and immediate danger that lies ahead is not so much that supplies will be reduced to anything approximating to a famine basis, but that foodstuffs will be allowed to be driven up to such excessive prices that the well-to-do section of the community will be able to satisfy their needs at the expense of the less prosperous. Bread, for instance, has been allowed to rise to 1 shilling per 4-pound loaf, and at the same time the Ministry of Food appeals to the nation to reduce its consumption of bread and buy substitutes, such as oatmeal, oatcakes, etc. The inevitable result of this policy (just as it has been in the case of potatoes and pulse substitutes) has been immediately to drive up the price of the suggested alternatives, much to the profit of the wholesale and retail traders concerned. This policy must be effectively checked in the interests of the general working-class population, and in particular of the women folk and children who are living solely on the fixed allowances given to dependents of men with the colors.

The national committee feels strongly that it is now imperative that the local authorities throughout the country should take a hand in the organizing and distribution of the food supplies in their respective areas, and at the same time that working-class organizations should set up food vigilance committees to stimulate active interest in the matter on the part of the local authorities concerned and to make the views of working-class consumers more effectively heard.

The committee therefore commend the accompanying draft policy to the consideration of all sections of the labor, cooperative, and industrial women's movement, and urge that the attention of mem-

bers of the House of Commons should be specially directed to its proposals.

The "draft policy" is set out as follows:

GOVERNMENT POLICY.

- (a) The purchase of all essential imported foodstuffs.
- (b) The commandeering or controlling of all home-grown food products, such as wheat, meat, oats, barley, potatoes, and milk.
- (c) The commandeering of ships and the control of transport facilities.
- (d) The placing on the retail markets of all supplies so obtained and controlled at prices which will secure the full benefit of Government action to the consumer, and the proportional regulation on a family basis of the sale of any foodstuffs in which there is a shortage of supplies.
- (e) The selling of bread and flour for the period of the war and six months afterwards at a price not exceeding 6 pence per quarter loaf, any loss so involved to be met as a portion of the general cost of the war.

MUNICIPAL POLICY.

Powers to be given to municipal, urban, and other local authorities to set up special food-control committees, to which shall be coopted representatives of labor, cooperative and industrial women's organizations, for the purpose of supervising the registration of consumers, the equitable local distribution of foodstuffs, and the institution of municipal food services.

LABOR POLICY.

That local labor, cooperative and industrial women's organizations throughout the country be urged to form special food vigilance committees for the purpose of focusing working-class demands in connection with food supply and stimulating governmental and municipal activity on the lines indicated above.

LOCAL CONFERENCES AND DEPUTATIONS.

That the workers' national committee, in conjunction with local labor, cooperative and industrial women's organizations in suitable areas, convene district conferences to advocate the above threefold policy on the lines adopted in connection with the pensions campaign, but on a larger and more comprehensive scale, the findings of such conferences to be made the subject of deputations to local M. P.'s.

PARLIAMENT.

That failing prompt and satisfactory measures being adopted by the Government to deal with the growing difficulties of the food supply and the continual exploitation of consumers by food profiteers, a national deputation, drawn from all parts of the country, should be organized to appeal directly to Parliament in person.

SUNDAY CLOSING LAW OF GENEVA, SWITZERLAND.¹

The following is a translation of the Sunday closing law which went into effect in the city of Geneva, Switzerland, on September 1, 1916:

ARTICLE 1. Every industrial or commercial establishment, whether listed in the commercial register or not, shall grant, without reduction in the wages, to

¹ L'Ami du Dimanche, 40th year, 2d series, No. 17. Published by the Swiss section of the Universal League for the Observance of Sunday. Geneva, Switzerland.

persons employed by it one full day of rest each week. That day shall be Sunday.

ART. 2. Exception is made in favor of the establishments in which it is not possible to fix the rest day on Sunday. These may be authorized by the department of commerce and industry, upon request, to fix a day other than Sunday. Such petition must state the reasons for such request.

In case of absolute necessity, the department may authorize a rest for a part of the day only.

Such special permissions shall as nearly as possible apply alike to all similar establishments, and may be revoked at any time.

ART. 3. When four-fifths of the employers in any commercial business or any industry in the Canton demand the closing of shops during the whole or a portion of the day of Sunday, the Council of State shall publish such petition in the official sheet, and notify all persons interested and who are not petitioners to file with it a statement of their wishes regarding the order of closing. At the expiration of one month the department will act upon the petition. It may decide upon the general and obligatory closing as intended by this law.

In case of the obligatory closing of pharmacies, the council shall establish a scheme for closing by turns (*rotation*) so as to leave open a portion of them sufficient for the public needs.

The Council of State shall decide all questions of petition, and the classes of commercial and industrial establishments affected.

ART. 4. Each industrial and commercial establishment must file with the department a statement showing how the rotation of Sunday work is observed in it.

Each establishment to which a permit is granted under article 2 shall keep an exact and detailed record of the rest days allowed each of its employees since the beginning of the current year, which record may be demanded at any time by the competent authority.

It is reported that many establishments have closed since the law became effective. In the group "food shops," 1,100 to 1,200 meat shops, milk depots, groceries, and other shops have already secured "obligatory" shop-closing orders. Barbers have closed entirely. Hat shops and shoe shops are petitioning for orders of closing. Pharmacies are open by rotation only. The three markets (*trois halles*) of the city of Geneva have remained closed all day Sunday since January 1, 1917.

DISEASE AS A COMPENSABLE INJURY.

A recent settlement is announced under the compensation law of Illinois on account of the death of 20 employees due to diphtheria and typhoid fever. These diseases were contracted by drinking polluted water furnished by the employing company. No contest against the payments was made by the company, the settlement being voluntary, according to a statement by one of the members of the State industrial board. The Illinois act contemplates the payment of benefits for accidental injuries arising out of and in the course of employ-

ment, the term accidental, according to the construction usually adopted, eliminating the ordinary occupational diseases from the scope of the act.

The English compensation law recognizes as compensable certain designated diseases said to be "due to the nature of the employment." Most of the American acts exclude from their purview diseases other than such disease or infection as naturally and unavoidably results from an injury, though cases appear in which a disease was itself classed as an accidental injury. Under the Massachusetts law the injury need not be accidental, and it is the established practice to compensate occupational or industrial diseases, so-called; while in California, where the original law has been amended by eliminating the word "accident" throughout, a recent decision indicates the adoption of a like policy (p. 88). In other States, however, in which the qualifying term "accidental" does not appear in the law, the construction of the courts has not been favorable to the inclusion of diseases of this nature, though in one case it was admitted that the term "injury" was broad enough to include every kind of disability, whether due to accident or not. It was held, however, that the law should be restricted to injuries of an accidental nature, i. e., those due to some sudden and unexpected event inflicting bodily harm and resulting in a period of disability. (*Industrial Commission of Ohio v. Brown* (1915), 92 Ohio St., 309, 110 N. E., 744.)

It is apparent that the failure to include so-called occupational diseases within the scope of the act, while permitting compensation for other diseases, must be based on a difference as to their nature and origin. No definition of occupational diseases seems to have been generally accepted. The British expression, "due to the nature of the employment," can hardly be said to be an attempt at definition. Dr. W. Gilman Thompson says¹ that they "may be defined as maladies due to specific poisons, mechanical irritants, physical and mental strain, or faulty environment, resulting from specific conditions of labor." Another authority (Dr. Von der Borcht) speaks of them as "those maladies which arise as the result of the prolonged action of harmful influences in certain occupations, and which consequently and exclusively occur in persons working in those trades, or at least more frequently than in other persons in general."² With a knowledge of the conditions and circumstances enumerated, it would seem possible to anticipate certain results, so that they would be removed from the classification of accidental injuries; or, as was said in an opinion of an administrative official in passing upon the claim of a workman who suffered from lead poisoning from inhalation of fumes produced by the burn-

¹ The occupational diseases, their causation, symptoms, treatment and prevention, New York, 1914, p. 1.

² Quoted in "Dangerous Trades," by Thomas Oliver, p. 15.

ing of lead paint: "It can not be said that these fumes were inhaled by accident. The fumes were necessarily produced by the work he was engaged upon. The inhalation of such fumes was to be expected, and probably could not have been avoided. Lead poisoning, under the circumstances, was the natural, if not the inevitable, result." (Schroeder case; Op. Sol., Department of Commerce and Labor, pp. 172, 175.) Compensation as for an accidental injury was therefore denied. This same official (the Solicitor of the Department of Commerce and Labor) allowed compensation in a case of compressed-air illness, otherwise known as "bends" or caisson disease, distinguishing this as a traumatic disease due to the lesion of tissues on account of the abnormal atmospheric pressure. This disease, however, is classed as an occupational disease by the British law and in treatises on the subject. Other traumatic diseases, i. e., those due to an injury or wound, as in the case of lockjaw or other infection, would be excluded from the class of occupational diseases as being entirely unrelated to the nature of the employment. Such diseases, if the sequel of a compensable accident, would, of course, come within the provisions of all compensation laws.

Typhoid fever and diphtheria, for which compensation was paid under the Illinois law, are neither occupational nor traumatic in their origin, but are idiopathic, i. e., of primary causation, and are subject to compensation, if at all, either on the basis of being accidental injuries, or as injuries arising out of employment merely, under laws not requiring the injury to be accidental. In view of the fact that the settlement in the Illinois case was voluntary, no opinion of the commission or of any court of the State is available as an expression of an official construction of the statute on this point. However, traumatic peripheral neuritis, due to constant vibration of a punch press on which the workman was engaged, was made the basis of an award by the industrial board of the State; so also was gas poisoning producing cerebral hemorrhage, where the workman was engaged for several hours in close proximity to a gas flame in which the combustion was imperfect. This was definitely classed as accidental, defining an accident to be "an untoward event not expected or designed." Compensation was also allowed (1917) in a case of acute arsenical poisoning from inhaling fumes from a spelter furnace, the event being unforeseen and unexpected—indeed, the first of its kind in the establishment in an experience of 40 years.

Direct precedent for an award, if the case had come before the board for hearing, is found in a case under the Wisconsin statute (*Vennen v. New Dells Lumber Co.* (1915), 161 Wis., 370; 154 N. W., 640). In this case typhoid fever was attributed to impure drinking water furnished by the employer, and was held to be the proximate and accidental cause of death, the disease having been contracted

while the workman was performing service growing out of and incidental to his employment. (And see p. 93.)

The decision in the Vennen case, classifying the contracting of a disease as an accident within the law, clearly eliminates the necessity of injury by violence, accepting the customary conception of physical force as a necessary factor. That the idea of the exertion of force is not essential, however, appears not only from the decision in the case last cited, but further from a definition given by the Supreme Court of Connecticut (*Linnane v. Aetna Brewing Co.* (1916), 99 Atl., 507), in which it is said that "an accidental bodily injury is a localized abnormal condition of the living body directly and contemporaneously caused by an unlooked for and untoward event or an unexpected condition." An inferior court of Pennsylvania was even more explicit in its statement that violence is not necessarily force, and that the action of any extraneous substance resulting in a disturbance of the structure of the body is violence within the meaning of the legislature (*Roller case*, Philadelphia Court of Common Pleas, 1917). In this case dermatitis, due to the fortuitous presence of poison in hides handled by the employee, was held to be compensable as an accidental injury.

Whether the Supreme Court of Connecticut would go quite as far as this can not be determined from a comparison of the facts in this case with those in the Linnane case, in which that court announced its definition of an accidental bodily injury. In the Linnane case a claim was made for compensation for the death of a workman from pneumonia, which was held to be due to exposure to storm resulting in the wetting of the workman's garments and his continuing to work with alternate exposure to heat and cold during a period of several hours. Compensation was denied on the ground that personal injury within the act involves both an accident and a bodily injury, and mere untoward or unexpected weather conditions, resulting in disease, do not come within this requirement.

The line drawn would appear to be the absence of lesion, classing the lesion as an accidental injury, if one may judge from the fact that the same court had allowed compensation (*Larke v. Insurance Co.* (April, 1916), 97 Atl., 320) in the case of an employee whose work required him to be out of doors on an extremely cold day, during which time his nose was frozen, erysipelas following with fatal results. It was pointed out in this case that personal injuries of accidental origin included bodily harm "whether arising by direct contact or lesion caused by external violence * * * or untoward mishap." That a lesion is essential might be inferred from the fact that the same commissioner who made the original award in the Larke case denied benefits to a workman who suffered frostbite of the toe, but without the serious injuries manifested in the Larke

case. In this case no disease was alleged to have developed, the claim being based simply on disability due to the injury from freezing—a form of disability for which the Supreme Court of Massachusetts has awarded compensation (*In re McManaman* (1916), 113 N. E., 287).

Disease due to inclement weather conditions was the basis of an award by the Supreme Court of New York (*Rist v. Larkin & Sangster* (1916), 156 N. Y. Supp., 875), though there was some complication of causes. In this case a heavy cold followed by pleurisy and pulmonary tuberculosis was attributed to the accidental necessity of the workman jumping into a river where the jumping itself had no immediate disabling effect, but the wetting and the subsequent exposure were chargeable with having caused the disease. A Connecticut commissioner denied compensation where a claim was based on pneumonia following exposure, saying that the evidence only indicated a possible connection between the employment and the disease, but fell far short of establishing any direct causal connection (*Shay case*, 1915).

A distinction is doubtless deducible between the conditions in the *Rist* case, where the workman was accidentally wetted, and the *Shay* case, where there seems to have been simply an exposure to inclement weather conditions, injury in the former case being classifiable as following on an industrial accident, which, though not in itself such as to be injurious, was found to be casually connected with the injury. This would accord with the position that infections and diseases causally connected with a recognized accidental injury are compensable, while injuries simply contemporaneous or coincident with employment are excluded. The identical disease, pneumonia, for which compensation was denied in the *Shay* case, was the basis of an award by a commissioner in the same State where there was septic poisoning from a sliver in the thumb of a workman, the disease being held to be causally connected with the injury. The Industrial Accident Board of Illinois reached the same conclusion in a similar case, septic pneumonia being held due to an inflamed leg following an abrasion from a fall, compensation being allowed.

No disease is more clearly defined or generally recognized as an industrial or occupational disease than lead poisoning. As already indicated, it is capable of exclusion from the class of accidental injuries by reason of the well-known consequences of continued exposure to the dust or fumes of lead, or to direct contact with it. A distinction was drawn by the Solicitor of Commerce and Labor in construing the Federal statute of 1908 between the gradual contraction of the disease by workmen whose employment inherently involved exposure to the dangers of lead poisoning, and those who would be so exposed only casually. Thus, workmen cleaning lead-

painted compartments by scaling or removing paint by a torch were necessarily exposed to the toxic influences of the substance with which they were working, and were denied compensation on the ground that the injury was not accidental. On the other hand a ship fitter, not using lead but working in a room where painting was going on, was held to be accidentally injured from a cause operating through a definite and known period. The same view evidently lies back of the opinion of the Supreme Court of Connecticut, which disallowed a claim for compensation under the law of that State where the injury was due to lead poisoning, the court saying that only injuries arising through accident were included (*Miller v. American Steel & Wire Co.* (1916), 90 Conn., 349; 97 Atl., 345). Similar also is the position of the industrial commission of Wisconsin (1914), holding that lead poisoning is not an accident but a culminating result of a continuing process and not compensable; and so of the Supreme Court of New Jersey (*Liondale Bleach, Dye & Paint Works v. Riker* (1914), 85 N. J. L., 426; 89 Atl., 929), which denied compensation for disability due to eczema attributed to an acid used in a bleachery, saying that it was not an "injury by accident," since no specific time or occasion of its occurrence could be pointed out.

This reasoning is similar to that of the Michigan supreme court (*Adams v. Acme White Lead Co.* (1914), 182 Mich., 157; 148 N. W., 485), the court ruling that since the law related only to accidents it did not include such a disease as lead poisoning. The Supreme Court of Ohio took the same view (*Industrial Commission v. Brown* (1915), 92 Ohio St., 309; 110 N. E., 744); this court added, however, that though the law as drawn did not allow it to grant compensation in such a case, "no sound policy can be suggested" for excluding such injuries from the purview of the law, and they should be placed on the same footing as accidents.

Of the construction placed upon the Federal statute of 1908 by the Solicitor of the Department of Commerce and Labor as to lead poisoning, it may be said that that official followed the opinion of the Attorney General (28 Op., 254) in construing the law, when a claim for disability on account of pneumonia contracted in employment was under consideration. The Attorney General, in passing upon this case, said: "There is nothing either in the language of the act or its legislative history which justifies the view that the statute was intended to cover disease contracted in the course of employment, although directly attributable to the conditions thereof. On the contrary, it appears that the statute was intended to apply to injuries of an accidental nature resulting from employment in hazardous occupations—not to the effects of disease." An examination of the report of the House committee, adopted also by the Senate, and of the debates in Congress, bears out the conclusion that the matter of com-

compensating for diseases was in no wise contemplated. The act does indeed provide for persons "injured in the course of employment," the qualifying term "by accident" not appearing. On the other hand, the whole procedure prescribed by the act used the term "accident," which harmonizes with the statement of the Attorney General that in the enactment of the law "only injuries of an accidental nature were in mind."

As already noted, the Solicitor of the Department of Commerce and Labor distinguished between cases of lead poisoning of an accidental nature and those where it seemed to be "the natural and inevitable result" of employment under the circumstances. After the establishment of the Department of Labor, and the transfer of the administration of this act thereto, the solicitor of the department construed the law as covering the occupational disease of lead poisoning however contracted, distinguishing such cases from those involving an idiopathic disease, such as the case of pneumonia passed upon by the Attorney General when he announced the foregoing opinion, the solicitor remarking that it was difficult to find any good reason for discriminating as to the manner in which the incapacity arose, the clear intention being to compensate for time lost because of incapacity arising from the employment.

The present Federal compensation law (act of Sept. 7, 1916) makes no reference to occupational or other diseases, though in the form in which the bill was originally presented compensation for industrial diseases was contemplated. The Judiciary Committee of the House decided on the omission of this provision in view of the lack of any accurate classification or definition covering the subject. The phraseology of the law, however, was not otherwise changed, so that no positive limitation to accidental injuries was made to appear. In the debate on the floor of the House, repeated reference was made to the omission of the provisions including occupational or industrial diseases, with more or less definite expression in favor of their inclusion. The member in charge of the bill made a statement as to the reasons for their omission, but added that he was informed that laws of similar phraseology had been construed to include occupational diseases. There would appear, therefore, to be discretionary power in the hands of the commission administering this act to include injury by occupational disease as "a personal injury sustained while in the performance of duty," setting the action in the committee and this statement of its representative on the floor of the House over against each other.

The courts of Connecticut and Michigan in the cases above noted took the view that the compensation laws of those States proposed alternative schemes to the old doctrine of employers' liability and

occupied the same field, and since this did not cover occupational diseases it could not be assumed, in the absence of explicit declaration, that they should be construed as within the new statutes. The Supreme Court of Massachusetts, on the other hand (*Johnson v. London Guarantee & Accident Co.* (1914), 217 Mass., 388; 104 N. E., 735), did not feel itself bound by such considerations, and the word "accident" not appearing in the compensation law, a claim for lead poisoning was allowed as for a personal injury, such injuries being possible without external violence or physical force.

The conclusion of the Connecticut and Michigan courts meets something of refutation in a California case (*Pigeon v. W. P. Fuller Co.* (1910), 159 Cal., 691; 105 Pac., 976), in which the employer was held liable as for negligence on the liability principle where he failed to instruct an employee as to the danger of lead poisoning in the work in which he was engaged, the workman being ignorant of the same. The employee was held not to have assumed the risks, and even though the utmost care to secure ventilation might have been taken, the liability remained on the employer. Another case in point is a decision by the Maryland court of appeals (*Baltimore & Ohio R. R. Co. v. Branson* (1916), 128 Md., 678; 98 Atl., 225). This was a suit for damages under the Federal Employers' Liability Act, covering railroads engaged in interstate commerce. The plaintiff was engaged in painting cars, using a "paint gun" or spray in his work, and contracted lead poisoning from the inhalation of fine particles of paint. The court ruled that the workman suffered injury within the meaning of the act and refused to limit liability to cases in which the injury was attended with force or violence. (And see pp. 93, 94.)

Mention has already been made of an indication of the attitude of the California courts in regard to the amended law of that State. The case on which this inference was based (*Hartford Accident & Indemnity Co. v. Industrial Accident Commission* (1917), 163 Pac., 225) was one in which a workman employed in grinding and sacking wheat and barley suffered from actinomycosis, an affection of the nose and mouth, and the injury was held to be compensable as arising out of and in the course of the employment, no question of accident being involved or mentioned in the action. However, there had been no manifestation of a disposition to broaden the construction of the law prior to its amendment, a case of dermatitis leading up to inflammation, infection, and abscess, classed as an occupational disease, having been denied compensation by the State industrial accident board.

Among the diseases classed by the English statute as due to the employment is anthrax. As to this it is easy to assume that the same view would be taken in construing the laws of the different States as

in the case of lead poisoning. The Massachusetts commission has made a number of awards in favor of claimants suffering from occupational anthrax, and the State industrial commission of New York (1915) held that such an infection would be compensable if there was an abrasion which was received during the employment through which the infection entered; otherwise no compensation would be allowed, as for an occupational disease without accident. Thus where a tannery employee contracted anthrax, presumably in the course of his employment, but through a cut received while being shaved, it was held that the cut itself was the injury, and infection was not classifiable as an accident. The State industrial commission, in denying compensation, followed the decision of the court of appeals of the State to the effect that contact with anthrax germs alone was not an accidental injury within the terms of an accident insurance policy. (*Bacon v. United States Mutual Accident Association*, 123 N. Y., 304, 25 N. E., 399.) Where, however, a workman struck his cheek against a tanner's beam, causing a breaking of the skin, and anthrax germs found lodgment, either at the time of the blow, through contact with the hides, or from the rubbing of the bruise by the workman with his hand, the commission awarded benefits for the period of disability, holding the injury to be an accidental one.

Another case falls between the foregoing in some degree, anthrax infection being contracted through chaps or cracks on the back of the hands of a workman who had been handling salt and wet hides. He had worn gloves while at work, and these had become saturated, causing the swelling and cracking by means of which the germs entered the system. Compensation was allowed, the commission making no use of the word accident in its opinion. This case was taken to the supreme court of the State, appellate division, where the award was unanimously affirmed. In the first place, the court pointed out the fact that the case, *Bacon v. United States Mutual Accident Association*, noted above as authority, was decided with reference to the provisions and terms of the insurance policy involved, and afforded no precedent for the case in hand. It was then said that "there is a broad distinction between the present case and the case of an occupational disease," inasmuch as it was not "incidental to the occupation, or a natural outcome thereof." Taking into view the manner in which the disease was contracted, it was declared to be an accidental injury, within the meaning of the statute, since its incurrence by the injured man "was unexpected, unusual, and extraordinary, as much so as if a serpent concealed in the hides had attacked him." (*Hiers v. John A. Hull Co.* (1917), 164 N. Y. Supp., 767.) It was said also that the award might be upheld on the ground that the abrasion or fissure of the hand was an accidental injury arising out of and in the course of the employment, and the disease or infection caused by the

anthrax germ might be deemed "such disease or infection as may naturally and unavoidably result" from such injury. (But would not the adoption of this view raise the question as to how this specific disease could be called the natural result of a mere chap or crack, if it was not incidental to the occupation, and therefore an occupational disease?)

The Workmen's Compensation Board of Pennsylvania (1917) reversed an award made by a referee for disability due to anthrax infection, holding that there was not sufficient evidence that the infection was received through a lesion produced by an industrial accident, the workman having had a pimple on the back of his neck which he had scratched and which was not a result of his employment.

As opposed to the decision of the New York Court of Appeals, which the commission followed in determining that the mere fact of infection was not an accident, the ruling of the British House of Lords on this point is of interest. (*Brintons v. Turvey* (1905), 74 L. J. K. B. N. S., 475, 92 L. T. N. S., 578.) It was said in the court of appeals that "It was an accident that the workman in dealing with the wool was brought in contact with that which might infect him with this disease of anthrax, and it was a further accident that the disease attacked him." In the House of Lords the fact of the germ lighting or striking upon the body of the workman and reaching "a delicate and tender spot in the corner of his eye" were regarded as accidental, one member of that body comparing the contact of the bacillus with that of a tack or other poisonous substance which cut the skin and set up tetanus. This decision was rendered under the common-law liability doctrine, the disease being subsequently brought within the list of occupational diseases in the compensation statute.

Another injury classed by the British law as an occupational disease is housemaid's knee, a case of which was allowed compensation by a Connecticut commissioner when a plumber was suffering from this disability after having worked for some time in a kneeling position.

Poisoning from the inhalation of gases, fumes, or dust developing in industrial processes is for the most part disposed of along the lines indicated in the foregoing account. Thus the Massachusetts supreme court (*In re Hurler* (1914), 217 Mass., 223, 104 N. E., 336) allowed compensation as for a personal injury where optic neuritis causing blindness was induced in an attendant on furnaces by the inhalation of poisonous coal-tar gases; so also of a case of lobar pneumonia following the drenching of a fireman with water and the inhaling of smoke. (*In re McPhee* (1915) 222 Mass., 1, 109 N. E., 633.) On the other hand the Industrial Accident Board of Michigan (1915)

declared gradual poisoning from the inhalation of cyanide vaporized by application to hot steel to be an occupational disease and not an accident, and therefore not compensable under the law of that State. A New Jersey court of common pleas took the same view as to copper poisoning due to inhaling dust from grinding and polishing brass products. (*Hitchins v. Magnus Metal Co.* (1912), N. J. Law Journal, 1912, p. 327.) This court, like the Supreme Court of Ohio, took occasion to say that it was just as important to protect employees against such conditions as from the results of accident and that the statute should be amended.

Some departure from the foregoing appears in cases held to involve an element of accident. Thus the Supreme Court of New York (*Naud v. King Sewing Machine Co.* (1916), 159 N. Y. Supp., 910) held that an injury resulting from the breathing of poisonous gases and fumes allowed to accumulate in a working place by reason of insufficient ventilation was an accidental injury, distinguishable from a vocational disease likely to be contracted from the inherent nature of the work. The Supreme Court of Wisconsin affirmed an award of the commission where miliary tuberculosis followed the inhalation of gas fumes, due to an explosion of gas in a brewery (*Heileman Brewing Co. v. Schultz* (1915), 161 Wis., 46; 152 N. W., 446). The position was taken that if there was a latent infection, the inhalation of the poisonous and irritant gases furnished an opportunity for its development into an active condition; and if there was no infection the destruction of lung cells by such inhalation lowered the vitality and made the person susceptible to infection. It was stated by the court that the award was approved since the evidence before the commission afforded a basis of fact for its conclusion.

Another form of injury, classifiable either as disease or accident according to the point of view, is what is known as sunstroke, heat stroke, or thermic fever. No decision of a court is at hand construing the compensation law of any State on this subject, but a number of administrative boards or commissions have made awards where the circumstances were such as to indicate an exposure to peculiar risks arising out of the employment, and to which the general public is not exposed. Thus the New York commission (1916), refused compensation to a worker employed in a room not warmer than the outside atmosphere, while the compensation board of Pennsylvania (1917), allowed compensation for a stroke following heavy hot work, saying that heat prostration produces such physical changes in the tissues of the body as to be personal violence to its structure; so, also, of the commission of California where an employee was handling cement in a warehouse with an iron roof and no windows, the thermometer standing at 105° F. The rule applicable as expressed by the Iowa board is that "where the employee sustained such in-

jury when put to work at a task which peculiarly exposes him to such injury, he should be paid the compensation provided for in the act"; or, as stated negatively by the industrial board of Illinois (1917), such an injury is not compensable "unless induced by conditions and surroundings to which the public is not subject." Awards have been made on the foregoing grounds by the Illinois board, the Ohio commission, and doubtless others. The general classification of the injury as accidental would appear to be implied in a decision of the Supreme Court of Iowa (*Stockwell v. Chicago & N. W. R. Co.* (1898), 106 Iowa, 63; 65 N. W., 665), in which a suit for damages had been brought at common law. The proceeding was by a locomotive fireman who was overcome by heat while going upon his engine to oil it by hand because the automatic lubricator was not working. The company was relieved from liability on the ground that the injured man had assumed the risk involved in such an undertaking.

In view of the preponderant construction by the courts excluding occupational diseases from the purview of the compensation acts, even where the wording of the laws does not explicitly do so, the question arises as to the possibility of a recovery under the employers' liability doctrine. Of course where, as in the State of Washington, there is a complete abrogation of all forms of procedure against an employer by his workmen other than that provided for by the compensation law, the matter of alternative relief is foreclosed. If, however, it is to be presumed that the compensation law applies only to accidental injuries of a definite type, the possibility of recovery for injuries not thus provided for remains. That the question is wider than that of occupational diseases only, appears from the settlement under the Illinois statute referred to in the beginning of this article, and the award in the *Vennen* case under the Wisconsin law.

Among the cases considered above, damages in liability actions were allowed for lead poisoning in two and denied for sunstroke in the one last mentioned. Comparatively few cases of this kind have been discovered, but those found present a considerable variety of subject matter.

As may be inferred from the basis of the decision in the *Stockwell* case just noted, the defense of assumed risks is the one most available in cases where damages are sought to be recovered for disease contracted in employment. Two separate ideas have been developed as the basis of the assumption of risks, one being that every risk is assumed which is not caused by a negligent act or omission on the part of the employer; while a somewhat different view is taken by some courts which describe the risks assumed as those which are "ordinary," taking that word in its familiar usage. It being one of the employer's duties to inform his employee of known dangers, failure to give instructions would leave the employer responsible for in-

juries ignorantly incurred. Thus a common-law action for damages due to the inhalation of nitric acid fumes was sustained where the plaintiff was shown to be ignorant of the risks and the employer had failed to give warning or instruction (*Wagner v. Chemical Co.* (1892), 147 Pa., 475, 23 Atl., 772). The Supreme Court of Wisconsin also allowed recovery of damages where sulphur fumes were injuriously inhaled, the employer having been negligent in the matter of taking preventive measures (*Deisenreiter v. Malting Co.* (1896), 92 Wis., 164, 66 N. W., 112).

A domestic servant entering employment in a home where typhoid fever existed, in ignorance of that fact, contracted the disease and was allowed by the same court to bring suit for damages against the employer (*Kleigel v. Aitken* (1896), 94 Wis., 432, 69 N. W., 67). A somewhat similar case was brought in a New York court (*Span v. Ely* (1876), 8 Hun., 255). In this instance smallpox was contracted by a man hired to whitewash a building in which a smallpox patient had died. The workman had knowledge of the facts, but relied on the assurance of the employer that there had been a thorough disinfection, and damages were allowed.

In a case in which a stableman became infected with glanders, the Massachusetts Supreme Court held that this was as much a bodily injury as if the workman had had a leg or arm broken by the kick of a horse. The employee had recovered against his employer, and the case was a suit by the employer to recover from its insurance company under a policy to cover the liability of the employer for "bodily injuries accidentally suffered" by employees in their employment, and the insurer was held liable (*H. P. Hood & Sons v. Maryland Casualty Co.* (1910), 206 Mass., 223, 92 N. E., 329); and so of a case (*Aetna Life Insurance Co. v. Portland Gas & Coke Co.*, (1916), 229 Fed., 552), in which a circuit court of appeals held that an insurance policy covering the liability of the employer for damages on account of bodily injuries or death accidentally suffered should avail where an employer had been compelled to pay damages to employees who contracted typhoid fever from drinking water furnished them by the employer; in this case the court held the injury to be accidental because of the unexpected and unknown presence of the typhoid germs in the drinking water, and assumed that there was no question of the fact of a bodily injury resulting therefrom. Practically identical was a case (*Columbia Paper Stock Co. v. Fidelity & Casualty Co.* (1905), 104 Mo. App., 157, 78 S. W., 320), in which the court of appeals of Missouri construed a similar policy to cover a case of kidney disease and dropsy produced by the absorption of poison consequent upon the handling of infected paper or rags in the

course of employment, an action for damages against the employer having resulted favorably to the employee.

On the other hand, we find the liability of the employer narrowed by the construction placed upon his duty in a few cases where the injury was held to be one not to be anticipated by the employer; it could therefore not be guarded against, and the employer's failure to do so could not be classed as negligence, thus leaving the employee to assume the risk of injury. On this view the Supreme Court of Pennsylvania (*Corcoran v. Wanamaker* (1898), 185 Pa., 496, 39 Atl., 1108), held that blindness caused by fumes from acids used in a laundry would not support a claim for damages where there was no evidence that the employer had knowledge that the use of such acids would cause an injury, nor that it was not customary to use acids in laundries in the same manner. This case evidently turned upon the lack of evidence to support the charge of negligence. A somewhat broader declaration of nonliability was made by the Superior Court of Delaware in a case (*Potter v. Richardson & Robbins Co.* (1915), 99 Atl., 540), in which a woman employed in canning chicken contracted an infection of the finger from handling putrid and decayed chickens taken from cold storage. The court held that it was not an injury so reasonably and naturally connected with the work, or so capable of being anticipated and foreseen, as to charge the employer with negligence for not inspecting the fowls or not giving instruction or warning with reference thereto. Another case of quite similar scope is one that was decided by the Supreme Court of Iowa since the compensation law of that State came into effect (*Canfield v. Iowa Dairy Separator Co.* (1915), 172 Iowa, 164, 154 N. W., 434). However, the injury for which the action was brought was suffered in 1910, before the compensation law became effective, so that no question of the relationship of this law to the liability law was involved. The plaintiff in this case had suffered poisoning by the gradual absorption of a mixture of oil and muriatic acid, and recovery was barred by reason of the fact that it did not appear that the employer knew, or by the exercise of reasonable diligence could have known, that the process used was dangerous to the workman. Much the same was the position of the Illinois Supreme Court (*Pinkley v. Chicago & E. I. R. R. Co.* (1910), 246 Ill., 370, 92 N. E., 896), in which an employee treating timber with creosote and inhaling fumes, inducing systemic poisoning, was denied recovery, since no similar case had occurred in several years' experience, so that the employer could not be charged with liability for the injury.

It is interesting to note in connection with these assignments of justification for excusing the employer from liability that the Illinois industrial board took advantage of exactly this unexpected-

ness of consequences to determine the propriety of making a compensation award for acute arsenical poisoning of an employee working about a spelter furnace, where such an event had not occurred before in 40 years' experience in the business.

A case involving directly the relation between workmen's compensation and employer's liability has already been referred to (*Naud v. King Sewing Machine Co.*). The injured man sought in the first instance to secure compensation benefits from his employer on account of injuries due to inhaling poisonous gases not properly removed by ventilation. The commission denied the right to benefits on the ground that the injury was not accidental, and therefore not within the act. Suit for damages under the liability doctrine was then brought in the supreme court of the State, special term, where it was ruled that the injury was distinguishable from a vocational disease, and was accidental, so that benefits might properly have been awarded by the compensation commission. The defendant company had offered as a defense to the plaintiff's action the assumption of risks, and in particular that the State compensation commission had adjudged that the alleged accident did not constitute an accident in law, and that by this judgment an action for damages became and was forever barred and foreclosed. The plaintiff demurred to this plea, claiming that it was insufficient in law, but the court held that while in its judgment the injury was an accidental one, the decision of the commission was final as to all questions of fact, and its judgment was properly set up as a bar against the action of the plaintiff *Naud*. It was pointed out that under the law the court in special term had no authority to review a decision of the commission, and if the commission was in error the plaintiff's remedy was an appeal to the appellate division.

Instead of accepting this suggestion, the plaintiff appealed on the ground that the special term had erred in disallowing the plaintiff's demurrer to the plea of final judgment established by the commission. This contention was sustained by the supreme court, appellate division (164 N. Y. Supp., 200), this court holding that the plaintiff stated a good cause of action, and that while some of the allegations were appropriate to a claim under the compensation law, it does not affirmatively appear by the complaint as a whole that the claim is of that character. It was further pointed out that the determination of the commission that the claim was not founded upon an accident did not suffice to make a determination under the compensation law, "but quite the reverse." The result is to leave the case open for further action, either in the court below if the defendant company desires to offer a new plea, or by appeal to the court of appeals, for which permission is said to have been asked. Obviously, according to the construction of the appellate division, an injury

which the compensation commission rejected as not furnishing a basis for awards may still be an injury for which an action at law will lie on the liability principle.

It should be kept in mind that the question of the accidental nature or otherwise of the injury was not before this division, so that the actual merits of the case yet await decision. However, there is in this case something of a summarization of the situation as it now stands, since it is clear that physical injuries of the nature complained of in this case have been compensated under the compensation laws, and should have been in this instance if the supreme court, special term, was correct in defining the injury as accidental. Under some laws also an award would have been allowed regardless of the accidental nature of the injury. On the other hand, the appellate division holds out the prospect of a recovery under the liability principle, as has been shown feasible under constructions of the duty of the employer as determined by the courts of Pennsylvania and Wisconsin (Wagner and Deisenreiter cases), and others. Another aspect that compels notice is the fact that, as yet, compensation legislation lacks an inclusiveness that would give to all workmen injured in the course of and by reason of their employment an adequate, simple, and certain relief, which is the avowed and proper object of the compensation system.

WORKMEN'S COMPENSATION LEGISLATION OF 1917—IDAHO AND SOUTH DAKOTA.

IDAHO.

The Legislature of Idaho at its recent session enacted a workmen's compensation law, approved March 16, 1917, to take effect January 1, 1918. This act is one of the most thorough and carefully drawn laws of its class. It includes all public employment, and all private employment carried on for pecuniary gain of the employer, agricultural and domestic service excepted. Casual employees, outworkers, and members of the employer's family living at home are excepted in private employments, while in public employment elective officials and persons receiving salaries in excess of \$2,400 are not included. The act is compulsory in form, and may be availed of in the excepted employments by agreement between the employer and employee filed with the State industrial accident board.

Injuries by accident arising out of and in the course of employment, not due to the employee's willful intention to injure himself or another, or to his intoxication, give rise to claims for compensation if they result in death or disability for more than seven days. Injuries occurring outside the State are entitled to compensation if the contract of employment was made within the State of Idaho; the act

also provides that employees from outside the State may enforce their rights within the State if they can reasonably be determined or dealt with by the board and courts.

In fatal cases, burial expenses are to be paid in an amount not exceeding \$100. Reasonable medical, surgical, and hospital service is to be furnished as may be required or requested at the time of the injury, and for a reasonable period thereafter. Service includes crutches and appropriate apparatus. No limit is set either to time or amount, but fees and charges are subject to regulation by the board.

Benefits payable are 55 per cent of the employee's average weekly earnings, with a maximum of \$12 per week and a minimum of \$6 unless the employee's earnings are less, in which case benefits equal the amount of earnings. In case of permanent total disability, however, the benefits shall not be less than \$6 per week. Death benefits may not continue beyond 400 weeks, and cease on the death or remarriage of a dependent widow or widower, or on a child reaching the age of 18 years unless incapable of self-support. Benefit payments terminating for the above reasons may be reapportioned among the surviving beneficiaries for the remaining portion of the period of 400 weeks. Disability benefits continue on the 55 per cent basis for 400 weeks, after which a flat rate of \$6 per week is fixed.

There is a schedule of compensation periods for disabilities caused by maiming. Lump sum settlements may be approved for either all or part of the benefits for either disability or death. If there are no dependents, the law provides that the employer shall pay the sum of \$1,000 into the administration fund.

The act is to be administered by an industrial accident board of three members, whose term of service is to be six years. Agreements between employers and employees must be approved by this board, and on failure to agree a committee of arbitration, one member of which shall be a member of the board, may be applied for. The awards of this committee are final, unless within 30 days review by the board is sought. The decisions of the board may be appealed from on questions of law if action is taken within 30 days after they are made.

A State insurance fund is provided for, and an initial appropriation of \$20,000 is made therefor. The fund is to be under the control of a State insurance manager appointed for a term of five years; this official classifies industries and fixes the premium rates; payments from the fund, which is in the hands of the State treasurer, are to be made only on warrants or vouchers authorized or signed by this manager and by the State auditor.

All employers must insure in the State insurance fund or deposit satisfactory security to guarantee payments. Surety bonds may be

issued only by companies approved by the board, and such bonds, as well as the policies of insurance in the State fund, must be directly available for the benefit of injured employees. Benefit payments have the same priority as wages due, may not be assigned, and are exempt from attachment and execution.

Nonresident alien beneficiaries receive one-half the amounts payable to residents unless otherwise provided for by treaty. If the laws of the country of residence would debar citizens of the United States from compensation benefits, any sums payable go to the industrial administration fund instead of to the beneficiary.

Persons malingering, refusing or obstructing medical examination, or persisting in practices of such nature as are likely to retard or prevent recovery, are to have their benefits suspended or reduced.

The State industrial board has authority to fix standards of safety and to make and enforce rules for the protection of the life, health, and safety of employees.

SOUTH DAKOTA.

The latest law in this field to be received by the bureau, and apparently the final one for the year, is one of South Dakota, approved March 10, 1917. The date when the law shall take effect is not specified, so that the act falls under the provision of the constitution fixing 90 days from the date of the adjournment of the legislature for this event.

The act is elective in form, but election is presumed in the absence of notice in writing served on the employer or employee, as the case may be, by the party rejecting; a copy of the notice must also be filed with the industrial commission. Waivers of the rejection must be made in the same manner, and 30 days are to intervene before either rejection or waiver is effective, except in case of an injury occurring within less than 30 days after the date of employment, where notice was given at the time of employment. The act is of general inclusiveness, but does not apply to casual employees or those not employed in the usual course of trade or business of the employer, nor to agricultural or domestic service. Public employees are included, and the remedy is exclusive in all cases where it applies. Insurance is required of all employers coming within the act, though provision is made for a showing of solvency satisfactory to the insurance department and industrial commissioner; approved benefit schemes may also be maintained. Policies must inure directly to the benefit of injured employees, and the insolvency of the employer does not relieve the insurance company from its obligations.

Compensation is payable for injuries causing death or disability for more than two weeks, but if the disability continues for eight weeks or longer compensation is to be computed from the date of the

injury. Serious and permanent disfigurements may also be compensated. Injuries due to the employee's willful misconduct, intoxication, or willful failure or refusal to use a safety appliance or comply with a safety law, are not compensable; the burden of proof in the foregoing cases is on the employer. The place of occurrence of the injury is not a vital fact, the right of compensation being a feature of the employment contract.

The amount of a death benefit is four times the average annual earnings of the deceased employee, not less than \$1,650 nor more than \$3,000. This sum is payable where there is a dependent widow, child or children, parent, grandparent, brother, or sister. If none of these survive, collateral heirs dependent may receive a benefit proportionate to the amount of support furnished. If there are no dependents, burial expenses in an amount not exceeding \$150 are to be paid. Payments to any beneficiaries cease on their death or on the remarriage of a widow. No mention is made of widowers, nor of the age at which benefits to children shall terminate.

Payments on account of nonfatal injuries are not to exceed 50 per cent of the average weekly wages, or \$12 per week in amount. If disability is total and permanent, a minimum of \$6 is also fixed. No sum of benefits for injuries may exceed the amount of a death benefit, nor continue beyond 6 years after the injury, except in cases of total permanent disability. Payments may be commuted to a lump-sum basis. If the injured workman dies before the amount of a death benefit is exhausted, the remaining sums are to be paid to dependents. A schedule for maimings is enacted, payments thereunder to be in addition to the amount paid during the period of total disability resulting from the same injury. In all cases, first aid, medical, surgical, and hospital services are to be furnished, continuing for a period of not more than four weeks and in an amount not exceeding \$100.

The act is to be administered by an industrial commissioner, the commissioner of immigration and his successor in office acting as such. Clerical and other assistants are provided for, and the commissioner is authorized to make rules for carrying out the provisions of the act. Agreements between employers and employees must be submitted to the industrial commissioner. If no agreement is reached, a board of arbitration, the industrial commissioner to be chairman, must take the matter under advisement. Each party is entitled to appoint an arbitrator, which failing, the commissioner himself shall make the appointments. Notice of injury must be given within 30 days unless a reasonable excuse is offered, and claims must be prosecuted within one year. Either party may ask for a review of an arbitration award, also for subsequent reviews based on changes of condition. Awards may be filed with the circuit court of a county in which the injury occurred, and a decree issued in accordance there-

with. Attorneys' and physicians' fees are subject to the approval of the industrial commissioner.

This completes the account of compensation legislation for the year, so far as the enactment of new legislation is concerned, making a total of 37 States of the Union having such laws. As stated in the May number (p. 745) of the MONTHLY REVIEW, the list for the year is Delaware, Idaho, New Mexico, Utah, and South Dakota. With the exception therefore of the State of North Dakota, the States without compensation laws are located in the southeastern part of the United States, bounded on the west by Missouri, Arkansas, and Mississippi, and on the north by Tennessee and Virginia. Vigorous efforts were made to secure the enactment of a law in Missouri. The Legislature of Florida also gave the matter earnest consideration. In Missouri the bill passed the house by a vote of 120 to 11, but was unfavorably reported by the senate committee. It was, however, immediately placed on the calendar by a vote of 20 to 13, but the friends of the bill were unable to muster the necessary number of votes to bring the bill to a consideration out of its regular order, and it died on the adjournment of the session. The workmen's compensation conference of the State finds encouragement over the results accomplished in spite of the present failure to secure the enactment of a law. The bill was actively opposed by the damage-suit lawyers, with whom were aligned a few representatives of the building trades councils of St. Louis and Kansas City and a few employers' associations. It had the support of over 90 per cent of the labor unions of the State, of many employers' associations and individual employers, the State Medical Association, the State Insurance Federation, and the State Bar Association, and was actively supported by the principal newspapers of the State.

The Legislature of Virginia, which meets next year, will have before it a bill which is being prepared for submission, and it seems certain that only a few years can elapse before the modern and approved system of compensation shall supplant the doctrine of employers' liability in the entire continental domain of the United States, as it already has in practically all its outlying territory.

WORKMEN'S COMPENSATION, ADMIRALTY, AND INTERSTATE COMMERCE.

The Supreme Court of the United States, on the 21st of May, cleared its docket of the series of cases on workmen's compensation noted in the earlier issues of the MONTHLY REVIEW.¹ The decisions

¹ December, 1916, pp. 27, 28; April, 1917, pp. 549-552.

rendered on March 6 sustaining the constitutionality of the laws of Iowa, New York, and Washington were presented as authoritative declarations "of the validity of practically every form and essential feature of the compensation laws now on the statute books of approximately three-fourths of the States of the Union." While the decisions of May 21 require no qualification of this statement as to essential features, they do effect a decided change of the construction and application of the laws of certain States as determined by the decisions of their courts.

There were four cases decided, two relating to admiralty and two to interstate commerce by railroad. The admiralty cases both arose under the New York law, though its construction by the courts of that State corresponded to the construction adopted for their laws by the courts of California, Connecticut, and Minnesota, so that the effect of these decisions by the Supreme Court will be to reverse the procedure not only of the New York courts, but also those of the other States named, and to control the action of all courts in which similar questions arise.

The case considered was that of *Southern Pacific Co. v. Jensen*. The plaintiff (defendant in the present proceeding), was the widow of a stevedore engaged in unloading a steamship in New York harbor. The vessel was owned by a railroad company which also operates a steamship line plying between the ports of New York and Galveston. An award in the claimant's favor had been made by the State workmen's compensation commission in October, 1914, and was approved by the various courts of the State. (*Jensen v. Southern Pacific Co.*, 215 N. Y., 514, 109 N. E., 600; see Bul. 189, pp. 221-224). The New York courts had held that the case was not covered by the Federal statute governing interstate carriers by railroad, and as no statute had been enacted by Congress governing carriage by water, there was no Federal legislation applicable to the case. The decision of the Supreme Court was identical so far as the application of the Federal liability law was concerned, but an objection raised by the company to the decision of the court below that the compensation law was "unconstitutional in that it violates Article III, section 2, of the Constitution, conferring admiralty jurisdiction upon the courts of the United States," was upheld by the Supreme Court as regards the particular portion applying the law to maritime injuries.

The provision of the compensation law held applicable by the court below was one embracing "longshore work, including the loading or unloading of cargoes." The decision of the Supreme Court was to the effect that the work in which Jensen was engaged was maritime in its nature, that his employment was a maritime contract, that the injuries which he received were likewise maritime, and that "the

rights and liabilities of the parties in connection therewith were matters clearly within admiralty jurisdiction."

It was pointed out that the Constitution extends the judicial power of the United States "to all cases of admiralty and maritime jurisdiction"; and that "in the absence of some controlling statute the general maritime law as accepted by the Federal courts constitutes part of our national law applicable to matters within the admiralty and maritime jurisdiction." (The *Lottawanna*, 21 Wall., 558, and other cases cited.)

From the opinion in the *The Lottawanna* the following was quoted:

It certainly could not have been intended to place the rules and limits of maritime law under the disposal and regulation of the several States, as that would have defeated the uniformity and consistency at which the Constitution aimed on all subjects of a commercial character affecting the intercourse of the States with each other or with foreign States.

The Congress has conferred upon the district courts of the United States "exclusive original cognizance of all civil causes of admiralty and maritime jurisdiction; * * * saving to suitors in all cases the right of a common-law remedy where the common law is competent to give it." To what extent State legislation might modify or affect the general maritime law was said to be difficult, if not impossible, to define, though "that this may be done to some extent can not be denied." It was held, however, that the boundary of possible modification had been passed in the legislation under review. "The legislature exceeded its authority in attempting to extend the statute under consideration to conditions like those here disclosed. So applied, it conflicts with the Constitution, and to that extent is invalid. * * * The remedy which the compensation statute attempts to give is of a character wholly unknown to the common law, incapable of enforcement by the ordinary processes of any court, and is not saved to suitors from the grant of exclusive jurisdiction."

The case, *Clyde Steamship Co. v. Walker*, involved identical principles, and was decided merely by reference to the opinion in the *Jensen* case.

Dissenting opinions were written by Mr. Justice Holmes and Mr. Justice Pitney, in which Justices Brandeis and Clarke concurred. The entire argument of the two opinions in dissent was taken up with a discussion of the force and effect of the provision of the Constitution conferring admiralty jurisdiction in civil cases upon the courts of the United States. It was pointed out by Mr. Justice Holmes that the saving to suitors of the right of a common-law remedy "leaves open the common-law jurisdiction of the State courts, and leaves some

power of legislation at least to the States," this contention being supported by citations of decisions by the Supreme Court itself. (*The Osceola*, 189 U. S., 158; *Atlantic Transport Co. v. Imbrovek*, 234 U. S., 52.) Further citations were made to "show that it is too late to say that the mere silence of Congress excludes the statute or common law of a State from supplementing the wholly inadequate maritime law of the time of the Constitution in the regulation of personal rights." (*Steamboat Co. v. Chase*, 16 Wall., 522; *The Hamilton*, 207 U. S., 398.)

In the dissenting opinion of Mr. Justice Pitney it was said: "I confess that until this case and kindred cases submitted at the same time were brought here, I never had supposed that it was open to the least doubt that the reservation to suitors of the right of a common-law remedy had the effect of reserving at the same time the right to have their common-law actions determined according to the common law or State statutes modifying those rules. This court repeatedly has so declared, at the same time recognizing fully that the point involves the question of State power." (*United States v. Bevans*, 3 Wheat., 336; *Steamboat Co. v. Chase*, 16 Wall., 522; *Atlee v. Packet Co.*, 21 Wall., 389; *The Max Morris*, 137 U. S., 1; *Belden v. Chase*, 150 U. S., 674.)

The opinion of the court laid considerable stress on the intention of the statute to establish uniformity in respect to maritime matters, that the freedom of navigation between the States and with foreign countries be not hampered and impeded. Both dissenting opinions referred to this subject, and cited cases showing the recognition of variations with regard to a number of points affecting interstate commerce in a field in which a considerable body of Federal legislation exists, Mr. Justice Pitney adding:

Surely it can not be that the mere grant of judicial power in admiralty cases, with whatever general authority over the subject matter can be raised by implication, can, in the absence of legislation, have a greater effect in limiting the legislative powers of the States than that which resulted from the express grant to Congress of an authority to regulate interstate commerce—the limited effect of which, in the [earlier] absence of legislation by Congress, we already have seen.

Closely related in spirit to the foregoing, and also in their effect as limiting the scope of State compensation laws, were opinions in cases reversing the courts of New York and New Jersey as to the applicability of the laws to employees injured in interstate commerce. The Federal statute of 1908 declares the liability of common carriers by railroad for injuries to employees due to the *negligence* of the employing company, and the courts of these two States had taken the position that in the field of injuries not due to negligence, including that large number attributable simply to the hazards of the

employment, the State may intervene and provide for its citizens engaged in transportation such relief as was afforded by the compensation laws in manufacturing or other employments covered by the acts. The Supreme Court held, two justices dissenting, that where an employee engaged in interstate commerce was injured, his only right to recovery arose from the provision of the Federal Employers' Liability Act, which undertook to establish "a uniform rule of liability throughout the Union with reference to the liability of common carriers to their employees." The power of the States to supplement such legislation was denied, the act being declared to be "comprehensive and also exclusive."¹ (New York Central R. R. Co. v. Winfield.)

The dissenting opinion of Mr. Justice Brandeis, in which Mr. Justice Clarke concurred, discussed with considerable fullness the origin, purpose, and scope of the employers' liability act, the specific words used, and the nature of the action taken in the enactment of the law; the nature of the workmen's compensation acts and the methods of their operation were also considered, and the conclusion was reached that they are not in conflict, but may and should operate side by side without a judicial imputation to Congress of the will to deny the States the power of thus determining the methods of caring for injured workmen "in a field peculiarly appropriate for State action." The case from the New Jersey court, *Erie Railroad Co. v. Winfield*, differed but little from that of the New York courts noted above and was similarly decided, with the same justices dissenting.

The result of these decisions is indeed to establish a uniformity of rights and liabilities for employers and employees engaged in maritime and interstate transportation, but in compensation States it likewise gives such employees a much less complete form of redress than is enjoyed by their fellow citizens engaged in other lines of employment. As already mentioned, the majority opinion in the *Jensen* case emphasized the desirability of uniformity, and the same point was touched upon in the *Winfield* (New York) case. Mr. Justice Brandeis in his dissent in the latter case pointed out the diversity in the conditions of living and in the needs of the injured employees due to diverse local conditions, reaching the conclusion that "the field of compensation for injuries appears to be one in which uniformity is not desirable, or at least not essential to the public welfare." On whichever side the weight of opinion rests as to the desirability or undesirability of national uniformity, there seems little doubt of the urgent necessity of a simplification of the conditions that have become accentuated by reason of the establishment of the compensation principle in so large a number of States. If State

¹ It is said that the New York authorities contemplate asking for a rehearing.

liability laws coordinated badly with the Federal law, as they undoubtedly did, the divergent principles of liability and compensation are still more incompatible.

Chairman A. J. Pillsbury, of the Industrial Accident Commission of California, speaking of the foregoing decisions, says: "These decisions have been little short of calamities to compensation throughout the country, and we shall feel it very severely here in California." It is pointed out that the commission felt some doubt as to its jurisdiction over injuries incurred upon the navigable waters of the State or upon the high seas, but concluded to resolve its doubts in favor of the injured workman, and was sustained by the supreme court of the State therein. Mr. Pillsbury added that the decision of the Supreme Court of the United States in taking the contrary position "has placed hundreds of thousands of workers beyond protection, for, under the admiralty laws, no compensation at all is liable where death results, and very little is obtainable in cases of injury, and the cost of maintaining the suits eats up whatever might be obtained."

The decision making the Federal liability law exclusive in all cases in which interstate commerce is involved restricts the State compensation laws very rigorously and continues the hardships falling upon those injured while engaged in interstate commerce. The dissenting opinion of Mr. Justice Brandeis emphasizes the large part of railroad injuries left uncovered by the Federal act, the burden of supporting the dependents of killed or injured workers resting upon the State without the possibility of charging it upon the industry under the construction of the act adopted by the court.

In this connection Mr. Pillsbury, in a letter to the United States Commissioner of Labor Statistics, under date of November 1, 1916, says:

A brakeman was at work on a train running between Oakland and Tracy, in this State. It contained 48 cars of intrastate commerce and only 3 cars containing interstate commerce. He was killed while switching intrastate commerce cars, but, inasmuch as his duties were to facilitate the transmission of these 3 cars throughout his run, we were forced to decide that he was engaged in interstate commerce and to deny the death benefit to the widow. Inasmuch as there probably was no evidence of negligence on the part of the company or its employees involved in his death, the widow will receive nothing. I call your attention to the further fact that if this widow has children and they become public charges, it will not be upon the bounty of the Federal Government, but upon that of the city of Oakland, which is a subdivision of the State of California, showing that the problem is essentially a local problem and should be handled by a tribunal representing the State and political subdivisions of the State called upon to bear the economic burden of every such injury.

In an address before the International Association of Industrial Accident Boards and Commissions, April 26, 1916, Mr. Pillsbury

cited the following cases which had been heard before the California Commission:

JURISDICTION DENIED.

A brakeman running on a division wholly within the State was stabbed and thrown from a freight train, the employer being without fault. We held that we were without jurisdiction when it was proven that the train contained cars loaded with interstate freight.

A switchman was injured without fault on the part of the company, while coupling the air hose on a train carrying interstate freight. Ten minutes before he might have been coupling air hose on a train carrying no interstate freight, in which event he would have been entitled to compensation. As it chanced he was entitled to nothing at all.

A laborer injured while loading timber in a railroad yard at Fresno, the timber to be used in repairing stockyards at another station, such stockyard being used both for handling interstate and intrastate animals, but chiefly the latter.

A car repairer had eye injured while driving out knuckle bolt of flat car used in general commerce, but mainly intrastate.

Laborer injured while building a temporary track to a pile driver to be used in building a bridge on a main line.

A railroad policeman injured while chasing tramps off an interstate passenger train at Colton, Cal. Held by the commission that it was without jurisdiction, which decision was affirmed as sound by the district court of appeals, although had the accident happened while chasing tramps off a local train a contrary decision would have been reached.

All the foregoing cases, and many more, were dismissed, after rehearing by the commission, for want of jurisdiction, but if compensation without regard to negligence is justifiable on any grounds it should have been awarded in each of the foregoing instances.

JURISDICTION ASSUMED.

The Industrial Accident Commission of California held hearings and awarded compensation in the cases following, among others, notwithstanding the fact that the defendant railroad companies had pleaded want of jurisdiction:

A pantry woman in a railroad restaurant at the depot in Los Angeles.

A machinist's helper, injured while grinding a rod with an emery wheel, it not being shown what use was to be made of the rod. In this case the jurisdictional issue was not pleaded by defendant, but in another similar case, where it developed in the testimony that a bolt being threaded at the time of injury was for use on a dining car employed in interstate and intrastate commerce, the proceeding was dismissed for want of jurisdiction.

A freight handler was injured while loading an asphalt cooker into a car at Sacramento to be shipped to an intrastate point, the car so loaded finally containing four pieces of freight coming from without the State, but destined to intrastate points, the same not having been loaded into the car at time of injury.

A baggageman at Orange, near Los Angeles, injured while closing door to baggage room, having just gone to the room to see if there was a consignment of fresh vegetables to be shipped to the Los Angeles market. Held compensable, but if he had just gone to the baggage room to see if there was a crate of vegetables to be shipped to a point outside the State the proceeding would have been dismissed for want of jurisdiction.

Charles B. Ruth was killed by accident at Roseville, near Sacramento, while repairing a switch engine, such engine having been out of commission several days and not being returned to service for three days after the accident. While in use 70 per cent of the freight it handled was interstate and only 30 per cent intrastate, and neither the engine nor the injured mechanic ever went outside the State in the course of employment. Held compensable by the commission, but on appeal to the Supreme Court of the State the decision of the commission was reversed and the award annulled on the ground that the decedent was at the time of the accident employed in interstate commerce and the industrial accident commission was without jurisdiction.

CASES GOING UP ON APPEAL.

A flagman at a crossing of a principal thoroughfare by an interurban line running from the Southern Pacific mole, opposite San Francisco, to the city of Berkeley, was struck by such a train and so injured that he died. Doubtless 99 per cent of all the traffic over this line is interurban and intrastate, perhaps as much as 99.9 per cent. Want of jurisdiction was pleaded as a defense, but compensation was awarded on the ground that at the time of the accident, if the injured workman was employed in commerce at all, it was intrastate, but that in fact he was not so employed, and although paid by the railroad company for his services his function was not to guard commerce, but, in obedience to an ordinance of the city of Berkeley, such watchmen are required to be maintained at certain crossings for the protection of citizens using the street.

A flagman at San Mateo was injured while striving to head off an approaching team about to run under the gate which he was lowering, subsequently dying of his injuries. His employment was also by the Southern Pacific Co., but in obedience to an ordinance of the city of San Mateo in order that citizens might not be injured by passing trains while crossing the line of the railroad, and not chiefly, if at all, for the protection of commerce either interstate or intrastate.

These two cases will be appealed to the Supreme Court of the State, and the decision of that court will be awaited by the industrial accident commission with patience as well as interest.

Numerous cases before the State and Federal courts have developed the great difficulty in administering the Federal liability law in correlation with State legislation. The question constantly recurs as to what is interstate commerce, since on this turns the right of the injured person to sue under the Federal statute, or to take action under the laws of the State. The decisions of the State courts are numerous and impossible of reconciliation. A considerable number of opinions on this point have been delivered by the Supreme Court of the United States, but even in undertaking to apply these as precedents, State courts do not attain uniformity. Something of the difficulty under which they labor will appear from a brief account of illustrative cases decided by the Supreme Court. Thus a trackman repairing a bridge used in both interstate and intrastate commerce was run down by an intrastate train, and the Supreme Court ruled that he was injured while engaged in interstate commerce, reversing

the United States Circuit Court of Appeals on this point. (*Pedersen v. Delaware, L. & W. R. Co.* (1913), 33 Sup. Ct., 648.)

A workman getting empty cars off a private track so as to run in from the company's yards to the private track coal cars brought from without the State was held to be within the act (*Pennsylvania R. Co. v. Donat* (1915), 36 Sup. Ct., 4); but a fireman on a switch engine handling sometimes interstate and sometimes intrastate traffic, and sometimes both, was injured at a moment when only intrastate traffic was being moved, and was held not to be within the act. (*Illinois Central R. Co. v. Behrens* (1914), 34 Sup. Ct., 646.) So a workman moving cars of coal to the chutes for the company's locomotives which were used indiscriminately in interstate and intrastate commerce was excluded. (*Harrington v. Chicago, B. & Q. R. Co.* (1916), 36 Sup. Ct., 517.) However, a brakeman uncoupling cars on a "pick-up" freight train running locally, but handling in part interstate freight, was held to come under the Federal act. (*New York Central & H. R. R. Co. v. Carr* (1915), 35 Sup. Ct., 780.) A fireman who had prepared his engine for an interstate run, and was crossing the tracks on his way to his boarding house on a personal errand and was killed, was held to be under the Federal and not the State law (*North Carolina R. Co. v. Zachary* (1914), 34 Sup. Ct., 305); and a yard clerk taking numbers of cars on an interstate train was likewise within the act, even though the yard was a terminal and all cars might have reached their ultimate destination. (*St. Louis, S. F. & T. R. Co. v. Seale* (1913), 33 Sup. Ct., 651.)

A car repairer replacing a drawbar in a car in use in interstate commerce is within the act (*Walsh v. N. Y., N. H. & H. R. R. Co.* (1912), 32 Sup. Ct., 169); but the work of a mechanic shifting a countershaft in a repair shop is too remote to be included (*Shanks v. Delaware, L. & W. R. Co.* (1916), 36 Sup. Ct., 188).

As already indicated, many refinements have been made by the State courts, and no fixed rule is available, each case being necessarily determined on the facts involved. In the case last cited Mr. Justice Van Devanter says:

Having in mind the nature and usual course of business to which the act relates and the evident purpose of Congress in adopting the act, we think it speaks of interstate commerce, not in a technical legal sense, but in a practical one better suited to the occasion, and that the true test of employment in such commerce in the sense intended is, Was the employee, at the time of the injury, engaged in interstate transportation or in work so related to it as to be practically a part of it?

Again he asks, "Was Shanks at the time of the injury employed in interstate commerce within the meaning of the employers' liability act? What his employment was on other occasions is imma-

terial, for, as before indicated, the act refers to the service being rendered when injury was suffered." On this principle if an injury is incurred at one moment of time it comes under one law, while a few moments later, with exactly the same appliances, over identical tracks, with the same associates, a workman may be under another law involving entirely different procedure and amounts of recovery. Indeed, it may almost be said that in many instances the case must be tried before one may be sure under what law recovery should be sought.

The steps that should be taken to remedy the conditions of confusion and conflict are not agreed upon, but so far as admiralty is concerned, if the Supreme Court decision stands, only Congress can legislate as to injuries on the high seas and navigable waters of the country. The fact that Congress can legislate on the subject of railway employment only where interstate commerce is involved, while the States can legislate only as regards intrastate commerce, together with the fact that the boundary line between these two lines of employment is exceedingly difficult of determination, renders the problem of railroad traffic much more complex. Whether by constitutional amendment the Congress should secure control of all commerce by railroad, both interstate and intrastate; or whether Congress should repeal its liability law and relegate the entire care of injuries to employees to the States; or, again, whether it should enact for interstate employees a compensation law more exactly comparable with the existing compensation laws of the 37 States now having them; or, lastly, whether it should enact such a law to be effective only in States not having compensation legislation of a standard type, are matters that are under discussion among those who are not satisfied with the existing complicated and perplexing situation. The fact remains that not all parties in interest are agreed that so radical a change as any of those proposed above is necessary, some groups desiring to retain the liability provisions so that damage suits may be available where negligence appears, the employees' organizations taking care of other cases of injury.

The improbability of Congress withdrawing from a field of legislation in which it has taken action and the great diversity of legal enactment and construction in the different States militate against the probability and to some extent against the desirability of relegating the matter entirely to the States. Constitutional amendments are difficult to procure, but an adequate compensation law covering interstate commerce only can be enacted at any time, and this would at least equalize the situation as between interstate and intrastate employees and make less vital the distinction between the two classes of remedies to be sought in case of injury to an employee.

COURT DECISIONS ON THE WORKMEN'S COMPENSATION LAW OF NEW YORK.

The bureau of statistics and information of the New York Department of Labor has issued a special bulletin with the above title, presenting partly by summarization and partly by reproduction of the opinions, a complete account of the judicial construction of the workmen's compensation law of the State. The volume contains 406 pages, with a list of cases, subject index, and an analysis of the principal subject matter. The material is topically arranged, following in part the sections of the law, and in part an analytical distribution of its subject matter.

Questions of constitutionality are first discussed, the date of the publication of the bulletin making it feasible to include only a one-line footnote referring to the decision of the Supreme Court of the United States declaring the law constitutional. The principal discussion of the act is included under the term "coverage," some 230 pages being devoted to this subject. The term is given a rather broad meaning in this compilation, necessitating a variety of divisions and subdivisions, the final result being a presentation of the principles developed by the courts on the various points in such a manner as to make the work a textbook on the compensation law of the State.

The opinions of the court of appeals, the highest court of the State, are given in full, as are also those of the appellate division of the supreme court. Opinions of the trial term of the supreme court and rulings of the State industrial commission are presented for the most part in a summary form; rulings of the attorney general of the State are also presented, some of them in full. No summary of these rulings and opinions is attempted here, as the more important of them have for the most part received notice in the bulletin of the bureau which is devoted to the subject of workmen's compensation (Bul. No. 203), and many of them more at length in the annual bulletins on decisions of courts on subjects relating to labor.

Inasmuch as the law of New York is of compulsory application to occupations classed as hazardous, including the principal industrial operations of a great industrial State, the volume is of interest outside the State, chiefly where laws of similar form are in force. There is, however, a large body of material of general application, since many phrases, as "arising out of and in course of employment," are common; while the discussions of horseplay, willful negligence, the effect of the workman's intoxication, disability due to disease, and other points, are of general interest.

RECENT REPORTS RELATING TO WORKMEN'S COMPENSATION
AND ACCIDENT INSURANCE.

MINNESOTA.

Under the Minnesota workmen's compensation act the department of labor and industries is required to obtain records of all compensation settlements and compile statistics of the law's operation, to observe in detail the operation of the act and to make recommendations to the legislature for its improvement, to assist in adjusting disputes, and to represent compensation claimants in court in disputed cases. A considerable portion of the fifteenth biennial report of the department for the years 1915 and 1916¹ is devoted to workmen's compensation experience in the State and recommendations for changes in the law, together with a rather detailed explanation of the reasons therefor.

The department has had to deal with several types of disputes, the most common being that of an injured workman to whom the employer or insurer has offered a settlement but who is afraid that they are not offering him what the law provides. Then there are disputes in which the department not only acts as adviser but actually consummates the settlement, disputes involving settlements in permanent partial disabilities, termination of the period of disability, lump-sum settlements, and cases where the workman or his dependents claim compensation is due them and the employer or insurer refuses to pay. So extensive has this "case" work become that the department, according to the report, has assisted in more than 50 cases per week ever since the compensation act went into effect (Oct. 1, 1913) and has watched every settlement to see whether it conformed to the law.

In view of this situation the first recommendation made to improve the law is that an amendment be passed providing that the approval of settlements in undisputed cases be formed by a bureau of compensation in the department of labor instead of by the district courts, and that this bureau be empowered to arbitrate disputes with the right reserved to the parties to refuse (within a definite number of days) to abide by the bureau's decision and to take the matter into court. This bureau would thus have charge of all administrative questions not involving disputes, leaving to the courts those functions which are judicial in character. The recommendation is submitted in the belief that "court actions normally arise out of strife and arouse human hatreds, and any system of procedure which requires the parties to go into court stimulates hostilities, mis-

¹Fifteenth Biennial Report of the Department of Labor and Industries of the State of Minnesota, 1915-16. Minneapolis, 1916. 195 pp.

understandings, and bitternesses," and that "such disputes and questions as can be decided by an administrative body ought to be so decided." It is thought that the proposed plan would be cheaper than the present system and that it would result in injured workmen getting their compensation more promptly.

The department also recommends that the rate of compensation be increased from 50 per cent of the wages to 66 $\frac{2}{3}$ per cent, showing in tabular form how the increase would materially benefit those who earn more than \$9.75 and less than \$22 per week. Other important recommendations are as follows:

That the waiting period be reduced to one week.

That all persons totally and permanently disabled receive compensation for 550 weeks.

That all persons actually dependent receive the same percentage of the wage as a person nonfatally injured receives.

That all the medical care necessary to cure from the injury be provided by the employer.

That some provision be inserted to guarantee that every injured workman shall receive the compensation due him.

That section 25 be amended to compel State approval of all lump-sum settlements.

That interest be charged the employer on compensation payments that are overdue.

That certain occupational diseases be covered by the compensation act.

The report discusses quite extensively the recommendation that the expense of all medical care necessary to a cure be borne by the employer. To prove that such an amendment is reasonable and would not be financially burdensome to employers, it is shown that employers and insurers are now voluntarily paying the entire cost of medical care in more than 90 per cent of the cases that require medical expenditure in excess of \$200. This 90 per cent, it is stated, includes those cases handled by firms who hire their doctors and hospitals on an annual contract plan and provide complete medical care, entirely disregarding the \$200 and 90-day limits fixed by law. It is also claimed that the average cost per accident for medical care is not excessive.

In Minnesota medical costs amounting to \$129,715.77 were reported in the nine months ending June 30, 1914; \$207,025.78 in the statistical year ending June 30, 1915; and \$255,542.80 in the year ending June 30, 1916. This total of \$592,284.35 represents the medical cost of approximately 37,000 accidents, most of which caused a disability of at least one week. This is an average cost of \$12 per accident.

The statistical report on the operation of the compensation law states that there were 450 fatal and 36,476 nonfatal accidents reported during the period from October 1, 1913, to June 30, 1916, but that of this number many did not come within the jurisdiction of the act. Thus, 408 fatal and 33,498 nonfatal are tabulated. All compensation

due has been paid in 159 fatal and 12,609 nonfatal cases; payments had been reported as in progress in 138 fatal and 689 nonfatal cases; and no payments had been reported in 111 fatal and 20,200 nonfatal cases. It is estimated that approximately 19,000 injuries lasted less than 2 weeks and were therefore noncompensable. Of the 33,906 accidents reported, almost 32,000 were in some manner disposed of by June 30, 1916. The total compensation paid in 12,768 closed cases during the 33 months was \$983,418.06, of which \$120,856.57 was in fatal cases and \$862,561.49 was in nonfatal cases, the average for each case being \$77.02. The amounts paid out by employers for the medical care of the injured during the same period was \$592,284.35, or an average of \$46.38 each. Thus the total amount paid for compensation and medical care in 12,768 cases closed between October 1, 1913, and June 30, 1916, was \$1,575,702.41,¹ or an average of \$123.41 each.

Very few disputes were tried out in the courts—146 being decided by the district courts and 27 by the supreme court.

The following table shows the weekly wage loss, the weekly compensation, and the amount and per cent of compensation paid, by nature of injury:

WEEKLY WAGE LOSS, WEEKLY COMPENSATION, AND AMOUNT AND PER CENT OF COMPENSATION PAID, BY NATURE OF INJURY, FOR THE YEARS ENDING JUNE 30, 1915 AND 1916.

Nature of injury.	Number of cases.	Weekly wage loss.	Weekly compensation.	Compensation paid.	
				Amount.	Per cent.
1914-15.					
Fatal.....	61	\$899.49	\$206.10	\$55,746.66	13.9
Permanent total.....	2	29.25	14.63	5,212.93	1.3
Permanent partial.....	411	5,879.96	3,011.80	125,090.47	31.1
Temporary.....	4,786	71,993.55	35,874.49	216,247.50	53.8
Total.....	5,260	78,802.25	39,107.02	402,297.56	100.0
1915-16.					
Fatal.....	77	1,124.53	179.27	42,029.14	9.9
Permanent total.....	5	92.70	41.20	14,393.06	3.4
Permanent partial.....	485	7,269.42	3,673.01	156,275.92	36.9
Temporary.....	4,473	67,185.16	34,185.90	211,385.67	49.8
Total.....	5,040	75,681.81	¹ 38,079.38	424,083.79	100.0

¹ This is the correct sum of the items as tabulated in the report, but is not the total as there given, namely, \$38,075.72.

The gross wage loss in temporary disability cases was \$579,148.04 in 1914-15 and \$539,874.45 in 1915-16. The amount of compensation paid in these temporary cases, as can be seen above, was \$427,633.17, and the total wage loss for the two years was \$1,119,022.49. Adding to these amounts, respectively, \$69,173.05, representing the amount of

¹ It is explained that this figure does not show the entire payments actually made before June 30, 1916, because there were 827 cases in which payments had been reported started before June 30, but which were not "closed" before the end of that statistical year. If these are included \$289,362.33 should be added to the compensation payments, making the total payments amount to \$1,865,064.74, or an average of \$137.19 per case.

compensation paid in temporary-disability cases prior to June 30, 1914, and \$201,658.50, representing the amount of wage loss in these cases during the same period, we have totals of \$496,806.22 and \$1,320,680.99. These figures cover 11,538 workmen who received compensation for temporary disabilities between October 1, 1913, and June 30, 1916.

Their compensation therefore amounted to about 37.5 per cent of their wage loss. A compensation law which pays 50 per cent of the wage loss after a two-week waiting period therefore pays less than 40 per cent of the workman's total wage loss. The average rate of compensation in Minnesota is \$7.49 per week—say, \$7.50. A one-week waiting period would have increased the compensation in these cases 11,538 times \$7.50 per week, or \$76,735. This is \$2,319 a month and \$27,828 a year. The one-week waiting period would also cause a week or part of a week's compensation to be paid in those cases where the disability is more than one week and less than two weeks. The exhaustive study made by the Ohio Industrial Commission on 96,952 temporary accidents shows that 16 per cent of all temporary disabilities terminate within the second week. Disregarding the fact that some of the nonfatal injuries reported in the last three years have been of a permanent character, and assuming that a one-week waiting period would increase the compensation in temporary-disability cases to the extent of requiring the payment of compensation for an entire week in an additional 16 per cent of the nonfatal cases, we get the following figures: Nonfatal accidents under act since October 1, 1913, 33,498. Sixteen per cent of these cases would be 5,360 cases. One week's compensation at \$7.50 per week in 5,360 cases would be \$40,200, or an average cost of \$1,318 a month or \$15,816 a year. A change from a two-week to a one-week waiting period would therefore apparently cost \$43,644 a year.¹

The average weekly wage loss in 1914-15 was \$14.95 and in 1915-16, \$15. No industry's accidents showed an average weekly wage above \$17.60 or below \$11.20 in 1914-15, or above \$18.73 or below \$11.19 in 1915-16. The average rate of compensation was \$7.43 in 1914-15 and \$7.55 in 1915-16.

The following table indicates the number of fatal cases closed and the total and average compensation paid to dependents:

NUMBER OF FATAL CASES CLOSED DURING THE YEARS ENDING JUNE 30, 1915 AND 1916, AND THE TOTAL AND AVERAGE COMPENSATION PAID TO DEPENDENTS.

Year.	Fatal cases.	Funeral expenses.		Compensation payments.								Average.
				Partially dependent.		Wholly dependent.		Compromise cases.		Total.		
				Num-ber.	Amount.	Num-ber.	Amount.	Num-ber.	Amount.	Num-ber.	Amount.	
1914-15.	61	21	\$2,565.22	14	\$9,371.00	21	\$40,435.44	5	\$3,375.00	40	\$53,181.44	\$1,329.54
1915-16.	67	24	2,185.19	20	14,638.39	14	22,270.56	9	2,935.00	43	39,843.95	926.60

During the two years, 19.7 per cent of the temporary injury cases lasted 3 and under 4 weeks, 16.5 per cent lasted 4 and under 5

¹ This paragraph is taken from the report (p. 45). Some of the totals shown are apparently inaccurate.

weeks, and 60.8 per cent lasted under 6 weeks. The report also shows that of the compensable cases closed, 31.4 per cent of the employees were in the \$12.51 to \$15 wage group and that 64.2 per cent were receiving \$15 or less. Approximately 36 per cent were in the 22 to 30 age group.

NEBRASKA.¹

A brief report on the operations of the workmen's compensation act of Nebraska during the second year of its existence is contained in the general biennial report of the department of labor of that State, under date of December 30, 1916.

The text of the report is concerned largely with a criticism of the act on its administrative side. The act itself makes no provision for supervisory or administrative authority. Settlements are to be made directly between the employer and employee. If they can not agree, the dispute may be submitted to arbitration, and if this fails, appeal to a court of equity may be made. The department of labor has no jurisdiction, other than to receive and file reports of settlements.

The deputy commissioner of labor declares that the method of claim settlement works great injustice to the worker. "Many injured employees," he states, "are at the mercy of employers and the representatives of insurance companies. There are a large number of reports on file in the department of labor which on the face of the report show that the employee has not received the full amount of benefits to which he is entitled. The injured employee does not understand sufficiently just what his rights are, and to avoid the expense of legal advice he submits oftentimes to a settlement which is far from what the law authorizes. The purpose of the compensation law is to get relief to the injured employee and his family when that relief is needed and without long-drawn-out negotiations and litigation. The representative of the insurance company too often knows the immediate need of relief of the injured employee and proceeds to negotiate and consume time before a settlement is proffered. The pressing needs of the injured employee and his family often, under the present method of settlement, necessitate an acceptance of terms of settlement not in accord with the provisions of the law. The employer pays a premium to the insurance company on the theory that the injured employee and his dependents will be compensated according to the provisions of the law, and that there is to be no sharp practice of shaving down of these settlements as to benefits."

¹ Nebraska. Bureau of Labor and Industrial Statistics, 15th Biennial Report, 1915-16. Lincoln, 1916. 243 pp.

The present system, the commissioner also declares, results in harmful and serious delays, and often requires the worker to pay out so much in fees and court costs that he loses a large part of the award to which he is justly entitled. To prevent the evils he urges that the law be so amended as to provide for a central administrative body, by whom all settlements should be made and the interests of all parties protected without cost or delay.

The statistical information of the report is limited to a few summary statements, based on such information as comes to the department under the requirement that notices of all claim settlements must be sent to it promptly. From a statement in the report of the department for 1915,¹ it may be assumed that these notices are not sent in all cases and thus that the records in the department's possession are not regarded as complete.

The information given indicates that the number of workers benefiting from the act was more than twice as great in the second year as in the first year. In 1915, there were 2,222 claim settlements reported, involving total payments of \$49,749. In the first 11 months of 1916, there were 5,411 claim settlements reported, involving \$125,262. The following table shows, in condensed form, the more significant data for the year 1915 and for the first 11 months of the year 1916. The total number of accidents reported, given in the top line, are from the reports made to the department under a general law requiring reports for all industrial accidents. The compensation act does not require the reporting of accidents.

NUMBER OF ACCIDENTS REPORTED, NUMBER OF CLAIM CASES SETTLED, AND TOTAL AMOUNT OF COMPENSATION AND MEDICAL PAYMENTS MADE, DURING THE YEAR 1915 AND THE FIRST 11 MONTHS OF 1916.

Item.	1915	1916 (11 months).
Total accidents reported	4,082	10,822
Claim cases settled:		
Fatal	6	16
Nonfatal—		
Compensable (i. e., 14 days and over)	599	1,000
Medical benefits only (i. e., under 14 days)	1,617	4,395
Total	2,222	5,411
Compensation benefits paid	\$24,923.62	\$76,143.50
Average—		
All compensable cases	41.19	74.93
Fatal cases	1,041.00	1,221.00
Medical and hospital benefits paid	24,825.69	49,118.87
Average—all cases	11.17	9.08
Total payments—compensation and medical	49,749.31	125,262.37

¹Nebraska. State Department of Labor. Report upon the operations of the workmen's compensation act, for the year ending Nov. 30, 1915. p. 18.

NEW JERSEY.¹

During its 1916 session, the New Jersey Legislature passed a bill creating, within the State department of labor, a workmen's compensation aid bureau. It is the duty of this bureau to review and approve all compensation settlements made under the provisions of the compensation act of 1911, to study the operations of the act, and to recommend amendments to the legislature. The bureau was organized with the commissioner of labor as chief, two referees, one investigator, an examiner with two assistants, and two clerks. Its first report has been issued under date of February, 1917.

The report is concerned chiefly with recommendations for changes in the law. The first of these is that the bureau should be given authority to make awards as well as merely to approve them. "The work of the bureau," says the report, "would be much enhanced and much more expeditiously accomplished if the referees were invested with power to end a controversy by making an actual award, which would be equivalent to a judgment when filed with the clerk of the court of common pleas."

Recommendation is made for an increase in the amount of compensation by fixing all awards on the basis of 66 $\frac{2}{3}$ per cent instead of the 50 per cent basis now in use. Also, it is suggested that a one-week waiting period be adopted as a compromise between the present two-weeks period and the agitation for the entire abolition of all waiting periods. In addition, the bureau makes numerous recommendations for minor changes in the reading of the law in order to clear up existing doubts and disputes.

The bureau does not regard a State insurance fund as necessary or essential at the present time. But it does urge that all employers be compelled to insure all operating risks, whether under the compensation section or under the liability section of the compensation act. It also recommends empowering the commissioner of banking and insurance with authority to modify all insurance rates should they prove exorbitant or inadequate.

The report contains a brief statistical statement of the operations under the compensation act for each of the years 1913 to 1916. It is pointed out, however, that the tabulation for 1916 is not very satisfactory, owing to the transfer of records and changing of reporting forms incident to the organization of the bureau. The following table summarizes the statistical data given in the report.

¹ New Jersey. Report on the Workmen's Compensation Aid Bureau for the year 1916. Trenton, 1916. 25 pp.

OPERATIONS UNDER THE COMPENSATION ACT IN NEW JERSEY, 1913 TO 1916.

Item.	1913	1914	1915	1916
Nonfatal accidents:				
Accident reports reviewed under liability section of the law.....	305	266	137	140
Accident reports reviewed under compensation section of the law.....	5,445	6,271	6,943	8,163
Total.....	5,750	6,537	7,080	8,303
Permanent total disability cases.....	1	3	2	6
Permanent partial disability cases.....	515	679	627	978
Temporary disability cases.....	5,234	5,855	6,451	7,179
Cases requiring medical aid.....	5,244	6,307	6,843	8,078
Cases in which medical aid reported supplied.....	4,659	5,888	6,604	7,768
Average medical expense per case.....			\$15.20	\$16.46
Cases not reported as receiving necessary medical aid, although entitled thereto.....	585	419	239	310
Cases entitled to compensation.....	4,276	5,327	6,401	7,725
Compensation cases adjusted to date.....	4,103	5,178	6,202	7,608
Average compensation per case.....			\$63.93	\$72.63
Cases not adjusted to date, although legally entitled to compensation.....	173	149	199	117
Irregular or faulty compensation, i. e., not agreeing with the terms of the act.....	207	169	27	44
Fatal accidents:				
Accident cases reviewed under liability section of the law.....	7	7	6	7
Accident cases reviewed under compensation section of the law.....	233	242	257	301
Total.....	240	249	263	308
Cases involving dependents.....	132	120	170	182
Cases paid.....	93	110	149	167
Cases entitled to compensation but not adjusted to date.....	39	10	21	15
Burial expenses due.....	198	240	255	298
Burial expenses reported paid to date.....	59	128	219	263
Burial expenses not reported furnished to date.....	139	114	36	35
Average burial cost, per case.....	\$145.68	\$127.88	\$107.22	\$118.40
Average compensation to dependents actually compensated.....	\$1,947.14	\$1,910.33	\$1,993.63	\$2,109.69
Lump-sum payments made to aliens.....	3	3	3	2
Average settlement to aliens.....	\$363.00	\$458.33	\$1,040.28	\$600.50
Fatal cases not involving dependents.....	101	122	87	119

PORTO RICO.¹

The workmen's compensation act of Porto Rico went into effect July 1, 1916. Provision was made for its administration by a board known as the "workmen's relief commission," consisting of three State officials—attorney general, the acting treasurer, and the director of labor—and two private members. This commission has recently submitted a special report to the legislative assembly regarding the operations of the act up to January 31, 1917. As this covers a period of only seven months, the statistical information is not regarded as in any way conclusive of future experience, but the commission offers the report to the assembly in the belief that certain features of the law need immediate revision or amendment.

The Porto Rico act is of the presumptive elective type, employers who reject it losing certain important defenses. Also, complete ex-

¹ Porto Rico. Special Report of the Workmen's Relief Commission, covering operations under the workmen's compensation act from July 1, 1916, to Jan. 31, 1917. San Juan, 1917. 114 pp.

ception is made of employers having less than five employees and of farm labor not using machinery. As a result of rejection and exemption thus provided for the benefits of the act would seem to be limited to a very small fraction of the workers in the island. Thus the present report shows 146 employers under the act, with a total annual pay roll of some \$1,385,000 as against 206 employers with estimated annual pay roll of between \$2,000,000 and \$2,300,000 who rejected the act. The rejections include almost all employers engaged in building construction. Also a majority of the larger steamship companies have rejected the law, so that the dangerous occupation of longshoring is covered to a limited extent only. By far the greater number of workmen actually under the act are in the sugar industry.

During the seven-months period reported 220 compensation claims were made. Of these, 7 claims were disallowed by the commission; 143 were allowed and final settlement made; 5 were partially settled, and 65 were pending at the end of the period. The total compensation cost in the 143 completely settled cases was \$1,889.75, but these cases included no fatalities and few serious injuries. Among the cases pending at the end of the period were 3 deaths and 2 probable permanent disabilities. If all pending cases are allowed and compensated at the maximum, the total costs and expenses of all kinds paid out by the commission during the first seven months will reach an estimated total of \$19,709.11.

The whole cost of the compensation system is borne by an insurance fund known as the "workman's relief trust fund." This is managed by the commission and is made up of contributions by the employers under the act. The annual premiums on the rates now charged are estimated for the current year at \$29,296, and for the seven-month period at \$17,089. To carry the fund at the start, the assembly advanced the sum of \$25,000 out of the public treasury.

WASHINGTON.

A special report recently issued by the bureau of inspection and supervision of the State of Washington gives a detailed account of the operations of the workmen's compensation act from the time the law became effective on October 1, 1911, down to January 1, 1916.¹ This investigation of the affairs of the industrial insurance department occupied nearly 10 months and the objects sought to be attained by the examination, as stated in the report, "were primarily a general review of the workmen's compensation act with a

¹ Washington, Department of Auditor of State. Bureau of Inspection and Supervision of Public Offices. Special report on the State Industrial Insurance Department, the workmen's compensation act, covering the operations of the department from the beginning on Oct. 1, 1911, to Jan. 1, 1916. [Olympia, 1917.] 104 pp.

view of determining its strength or weakness and making recommendations to repair the weakness where found, the verification of the accounts carried by the department with the various contributors, and an investigation of the office system and the methods used for caring for the receipts and making disbursements, and to make such changes as might seem necessary. The fact that the former claim agent was able to cover defalcations amounting to \$20,000 indicated a lack of proper system. During the audit period contributions were received from approximately 14,000 firms throughout the State and over 60,000 claims were filed with the department."

The investigation involved the checking up of the claims paid and the verification of about 200,000 items of receipts and disbursements. The totals in the tables included in this report do not agree with the totals as shown by the reports of the department, which, however, the report states, "has no effect on comparisons of percentage arrived at in the tables intended as a basis for the revision of the rates of assessment."

The report states that certain serious irregularities were uncovered, among which were the payment of claims without signed authority, or without having been ordered paid by any commissioner; payment of claims not certified as correct by the claim agent; settlement of claims in due course in the office without approval of the chief medical adviser; altering the final award and decision of the chief medical adviser; discrepancies between signatures appearing on the application and on the warrant, and insufficient attention paid to the collection of contributions from employers.

A careful checking up of the records shows that of the 60,358 claims filed with the commission to December 31, 1915, 46,725 were paid, 6,129 were suspended, 2,549 were rejected, 2,264 were not perfected, 685 were completed but no warrant was issued, 24 were waived and canceled, 213 were blanks, and 1,769 were paid subsequent to January 1, 1916. The condition of the accident fund on December 31, 1915, as taken from the books of the department is shown in the following statement:

Total amount contributed.....		\$5, 804, 340. 40
Claims paid	\$3, 501, 114. 77	
Pensions paid	431, 521. 04	
Refund of excess contribution.....	55, 842. 91	
Balance reserve on approved claims..	1, 336, 233. 89	
		5, 324, 712. 61
Total.....		
Balance in the fund.....		479, 627. 79

One of the matters given particular consideration by the bureau of inspection and supervision in making this examination and sta-

tistical compilation of the operations of the workmen's compensation act was the methods of handling fatal and permanent total disability claims, involving primarily the setting aside of reserves. According to the law, for every case of death or permanent total disability the State treasurer shall take from the accident fund a sum of money, not to exceed \$4,000, to be known as the estimated lump value of the monthly payments provided for the case, to be calculated on the theory that a monthly payment of \$20 to a person 30 years of age is equal to a lump-sum payment of \$4,000. Taking this \$4,000 and dividing it by 35.33 (the life expectancy of a person 30 years of age) the sum of \$113.22 was secured as an annual life value, and based upon this a table was computed as a guide in the setting aside of reserves. The report states that the maximum of \$4,000 allowed by law has been inadequate, and that in general the reserves set aside were insufficient, resulting in impairment of the fund. The report states that to meet this condition "there should be set aside a materially increased amount for all new pensions, and also an immediate call made for a sum of over \$500,000 in order to make the present reserve care for the accidents of to-day."

A number of recommendations are submitted intended to strengthen the law. It is recommended that the right to make lump-sum settlements be withdrawn from the commission, except in the case of remarriage, and that the remarriage inducement be increased to \$500. It is stated that in four years the returns to the accident fund of one class were \$90,292.66 for 40 remarriage cases, and \$5,243.70 for 6 cases of death of pensioners, thus effecting a material saving to contributors.

WEST VIRGINIA.¹

The recent report of the State compensation commission of West Virginia reviews the operations of the accident compensation law of that State from October 1, 1913, when the law became effective, down to June 30, 1916, a period of 2 years and 9 months. The report is devoted largely to the financial operations of the State compensation insurance fund.

The West Virginia compensation act applies to practically all employments except agriculture and domestic service. It is elective in form, but employers not electing are absolutely deprived of their most important common-law defenses. Employers must express their desire to elect by insuring in the State fund, except that, under certain conditions, they are permitted to carry their own insurance. But the conditions required for self insurance are so rigid that the

¹ West Virginia, Report of the State compensation commissioner to June 30, 1916. [Charleston, 1916.] 139 pp.

State fund is practically monopolistic. According to the present report only 20 employers were carrying their own risk, on June 30, 1916, as against 1,819 insured in the State fund.

The fund, since its inception, has labored under a deficit. This is attributed solely to the fact that the law as originally enacted limited the premium rate for any class to \$1 per \$100 of wages. This proved insufficient, notably in the coal mining class, and the limitation was removed by the legislature with the beginning of the third fiscal year, 1915-16.

Because of this rate limitation and the occurrence of a serious explosion in the mines at Eccles, there was a deficit as of June 30, 1914, of \$290,502.13, the average premium rate for the year having been 94 cents against losses of \$1.38 per \$100 of wages. During the year ended June 30, 1915, the deficit increased to \$580,015.23, the average premium rate having been 92 cents and the losses \$1.26 per \$100 of wages. During this year serious explosions occurred in the mines at Layland and Carlisle. Beginning July 1, 1915, the premium rates were advanced, and for the year ended June 30, 1916, averaged \$1.54 and the losses \$1.10 per \$100 of wages. This reduced the deficit at the end of the year to \$135,859.60.

The premium earned and losses incurred, the expenses of administration, and the ratios of expense to premiums and to losses are shown for each of the three years of the fund's existence in the following table:

ADMINISTRATIVE EXPENSE COMPARED TO EARNED PREMIUM AND LOSSES.

Year ended June 30—	Earned premium.	Administrative expense.	Ratio of administrative expense to earned premium.	Losses.	Ratio of administrative expense to losses.
1914 ¹	\$636,333.75	\$29,803.75	4.68	\$932,023.32	3.20
1915.....	809,061.08	54,119.58	6.69	1,101,038.14	4.92
1916.....	1,534,324.57	74,946.51	4.88	1,093,892.74	6.85
Total.....	2,979,719.40	158,869.84	5.33	3,126,954.20	5.08
Administrative expense paid by employers carrying own risk.....		3,600.85			
Net cost of administration.....		155,268.99	5.21		4.97

¹ 9 months.

The accident experience of the State fund is dominated by the coal-mining industry. This industry, for the three-year period, paid 66 per cent of all premiums collected, and was responsible for 77 per cent of the losses, for 85 per cent of the fatal accidents, 89 per cent of the permanent total disabilities, 69 per cent of the permanent

partial disabilities, 71 per cent of the temporary disabilities, and 21 per cent of the medical expense. Mine explosions alone were responsible for a compensation loss of \$450,147 out of total losses of \$3,126,954, or 14 per cent.

The accidents as given in the compensation commissioner's report, by years, were as follows:

NUMBER OF STATE FUND ACCIDENTS REPORTED, BY FISCAL YEARS.

Year ended June 30—	Degree of disability.			Fatal.	Total.
	Tempo- rary.	Perma- nent partial.	Perma- nent total.		
1914 ¹	10,798	74	26	520	11,418
1915.....	14,797	130	36	551	15,514
1916.....	18,860	261	18	482	19,621
Total.....	44,455	465	80	1,553	46,553

¹ 9 months.

The total number of employees, computed on a full-time basis, covered by policies of the fund on June 30, 1916, is reported as having been 146,837.

Of the total cost of the accidents compensated 59.6 per cent was chargeable against fatalities and 6.7 per cent against medical expense. The details on this point are as follows:

DISTRIBUTION OF LOSSES, PRESENT VALUE BASIS, AS TO THE EXTENT OF INJURY, BY FISCAL YEARS—STATE FUND, SECTION 24.

	Year ended June 30, 1914.	Year ended June 30, 1915.	Year ended June 30, 1916.	Total.	Per cent.
Medical expense.....	\$51,417.24	\$70,511.42	\$88,324.39	\$210,253.05	6.7
Funeral expense.....	23,038.75	28,522.22	25,427.74	76,988.71	2.5
Temporary disability.....	137,433.51	193,631.87	253,946.67	585,012.05	18.7
Permanent partial disability.....	60,925.82	96,772.63	122,593.94	280,292.39	9.0
Permanent total.....	35,208.00	50,400.00	25,200.00	110,808.00	3.5
Fatal.....	624,000.00	661,200.00	578,400.00	1,863,600.00	59.6
Total losses.....	932,023.32	1,101,038.14	1,093,892.74	3,126,954.20	100.0

The commissioner makes several recommendations for changes in the compensation act. Particular emphasis is placed on the desirability of abolishing the system under which 10 per cent of the cost of compensation is paid by the employee. West Virginia and Oregon are the only two States having compensation acts in which any portion of the compensation cost is placed upon the workers.

The report does not touch upon the subject of accident prevention, the compensation act making no provision regarding prevention and the commissioner having no authority in this matter.

INDUSTRIAL POISONS IN THE MANUFACTURE OF EXPLOSIVES.

Of more than ordinary interest in the present crisis is bulletin No. 219, entitled "Industrial poisons used or produced in the manufacture of explosives," just issued by the United States Bureau of Labor Statistics. The study was made by Dr. Alice Hamilton during 9 months of 1916, the 41 factories visited being located in Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and Indiana, and employing about 90,000 workers. Of these approximately 30,000 were doing work exposing them to poisons, and practically no women, girls, or boys were among this number.

The explosives manufactured in these factories are nitrocellulose or nitrocotton, including pyroxylin and military guncotton; smokeless powder; picric acid and ammonium picrate; nitroglycerin and dynamite; trinitrotoluol or TNT or triton; fulminate of mercury; tetranitranilin or TNA; tetranitromethylanilin or tetryl; nitronaphthalenes; and ammonium nitrate. Their production involves the use of nitric acid, sulphuric acid, benzol and toluol, anilin oil, chlorbenzol and dinitrochlorbenzol, phenol or carboic acid, sulphuric ether, mercuric nitrate, and amyl acetate, while in the course of manufacture certain poisons are evolved as the result of chemical reactions, these being oxides of nitrogen or nitrous fumes, sulphur dioxide, chlorine gas, and ethyl nitrite.

The character of the work required leads to a very high labor turnover, instanced by the fact that in one plant it was necessary to employ about 4,000 men during 13 months to keep up a force of 200. On the whole, wages are high and living conditions poor in many of these places. In most of the plants the men work three shifts of 8 hours each; two shifts is the exception.

It was impossible to obtain accurate figures as to the amount of sickness and death caused by work in this industry since the war broke out. Many cases were never recognized; others were noted by company physicians or insurance physicians who were unwilling to give any information concerning them; in some factories there was either no medical care or it was inadequate; in other factories records were so incomplete as to render the data somewhat misleading. Taking only cases reported by physicians, however, although information as to other cases was obtained, it was found that in 28 plants, in the space of about one year, there were 2,507 cases of industrial poisoning, of which 75 were women. Of the total number of cases 53 were fatal, 2 of these being women. About 55 per cent of the total cases and 53 per cent of the fatal cases were caused by nitrogen oxides and nitric acid, while 28 per cent of all cases and 25 per cent of the fatal

cases were due to trinitrotoluol, or TNT, which is manufactured and made into charges for high-explosive shells.

The reason nitrogen oxide poisoning or "fume sickness" heads the list is that all of these explosives are produced through processes of nitration in which a mixed acid is used, one of the ingredients being sulphuric acid and the other nitric acid 100 per cent strong. The higher the nitration the greater the danger from fumes. The 1,300 to 1,400 men who suffered from these fumes were employed in making nitrocellulose or nitrocotton, picric acid or trinitrophenol, the nitrotoluols, nitrobenzols, nitronaphthalenes, nitroglycerin, and the nitric acid needed for these processes.

Another extremely dangerous process is the filling of shells with trinitrotoluol (TNT), either by pressing, which is very dust productive, or by molding, which involves fumes.

The report describes the physiological action of the poisons mentioned and then takes up in detail the processes involved in the manufacture of poisons, closing with suggestions for the prevention and treatment of cases of industrial poisoning in the manufacture of explosives. Safety standards and precautionary measures applicable to the manufacture of certain explosives, adopted by Massachusetts, and Pennsylvania, and in Great Britain, appear as appendixes to the bulletin.

INCREASE IN INDUSTRIAL INSURANCE ACCIDENT MORTALITY DURING 1916.

BY LOUIS I. DUBLIN, PH. D., STATISTICIAN, METROPOLITAN LIFE INSURANCE CO.,
NEW YORK.

On the basis of recently compiled mortality statistics covering the experience of the Metropolitan Life Insurance Co. during the year 1916 on 9,000,000 white lives insured in its industrial department, the company concludes that the accident rate for the working classes of the United States increased 5 points per 100,000 exposed over the mortality showing for 1915. This condition is contrary to the more recent tendency toward a reduction in the fatal accident rate and may well be the result of the increased activity in industry and of the speeding-up processes incident to war conditions. The following table gives a comparison of the detailed statistical results for 1915 and 1916:

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NUMBER OF DEATHS FROM ACCIDENTS AND RATE PER 100,000 EXPOSED, 1915 AND 1916, AMONG WHITE POLICYHOLDERS, BASED ON METROPOLITAN LIFE INSURANCE CO. EXPERIENCE.

Causes of accidental death.	1916		1915	
	Number of deaths.	Rate per 100,000.	Number of deaths.	Rate per 100,000.
Accidents and unspecified violence (total).....	6,635	73.5	5,861	68.9
Burns.....	754	8.4	687	8.1
Absorption of deleterious gases.....	270	3.0	214	2.5
Accidental drowning.....	858	9.5	1,008	11.9
Traumatism by firearms.....	140	1.6	122	1.4
Traumatism by cutting or piercing.....	17	.2	11	.1
Traumatism by fall.....	1,241	13.7	1,051	12.4
Traumatism in mines and quarries.....	91	1.0	81	1.0
Traumatism by machines.....	143	1.6	118	1.4
Traumatism by steam railroads.....	685	7.6	622	7.3
Traumatism by street cars.....	237	2.6	192	2.3
Traumatism by automobiles.....	795	8.8	486	5.7
Traumatism by other crushing and other vehicles.....	303	3.4	299	3.5
Electricity.....	93	1.0	62	.7
Other accidental and unspecified external causes.....	1,008	11.2	908	10.7

There was a slight increase in the mortality from burns. The rate in 1916 was 8.4 per 100,000, which may be compared with 8.1 per 100,000 in 1915. Absorption of deleterious gases showed an increase in mortality from 2.5 to 3 per 100,000. Accidental drowning showed a decrease in the rate from 11.9 per 100,000 to 9.5 per 100,000. The figure for 1915 was rather high because of the inclusion of the deaths in the Eastland disaster. With these deaths excluded the rate for accidental drowning in 1916 would still have shown a slight decline over the 1915 experience. Traumatism by firearms increased in rate from 1.4 per 100,000 to 1.6 per 100,000. Falls caused more deaths in 1916 than in 1915, the two rates being 13.7 and 12.4, respectively. Machinery accidents showed a higher mortality in 1916 than in 1915 as did also steam railroad and street railway accidents and injuries.

Mortality from automobile accidents and injuries showed by far the largest increase in the rate for any of the specified causes of accidental mortality. In fact, these automobile accidents were alone responsible for three-fifths of the increase in the total accident rate in 1916. In 1916 the rate was 8.8 per 100,000 as compared with 5.7 per 100,000 in 1915. Deaths from electricity also showed a slight increase in the rate, from 0.7 per 100,000 in 1915 to 1 per 100,000 in 1916. Accidental deaths caused by vehicles other than steam railroads, street railways, and automobiles had slightly less mortality in 1916 than in 1915, the two figures being 3.4 for 1916 and 3.5 for 1915.

ANTHRAX FROM INFECTED SHAVING BRUSHES.

In the annual report of the Local Government Board of Great Britain for 1915-16 (pp. 9-11),¹ following a brief reference to a number of cases of anthrax due to the use of infected shaving brushes, is an account of the examination of samples of suspected brushes, especially of the cheaper sort, and of samples of unmanufactured horsehair, at the board's laboratory, resulting in the finding of many cases of anthrax spores. To determine the presence of these spores the shaving brush is well rubbed up in a mortar with normal saline and the washings are heated to 80° C. (176° F.) for half an hour, after which plates are sown, and a guinea pig and mouse are inoculated, some of the material being kept in reserve in case further tests are required. In making the plates, it is explained, the agar is inoculated in the liquid condition before pouring, so that deep colonies may be obtained. A case is not reported as positive until both a typical culture has been obtained and typical anthrax has been produced in a guinea pig, in the latter case the bacilli in the tissues giving the characteristic staining reaction with polychrome methylene blue:

With regard to the cultures, * * * when a typical colony is found the test for pathogenicity may sometimes be hastened by inoculating a fresh guinea pig with this, if there is any reason to suspect that the guinea pig inoculated with original material may not give a prompt and unequivocal result, owing to the paucity of anthrax spores inoculated or to interference by excess of extraneous organisms. But I do not think it safe to rely on the plate method alone for isolating anthrax from the original material. The plates may become overgrown unless a large number is used; and in any case a much larger quantity of material can be put into a guinea pig, a consideration which is of importance if anthrax spores happen to be present, but only in very small number. If the plates fail, but the animal test is positive, a typical culture can readily be obtained from the infected animal. There is sometimes advantage in inoculating a mouse as well as a guinea pig with the original material, as the former animal responds very promptly even to a very small number of anthrax spores. Thus it occasionally happens that the diagnosis can be most quickly made by using the tissues of an infected mouse for both culture and guinea-pig tests.

Experiments are being conducted in the disinfection of horsehair suspected of containing anthrax spores. The report states that in disinfecting with steam under pressure it is required that the temperature shall not be so high as to damage the horsehair, and it is essential that the steam shall penetrate every particle of the material at a temperature known to be efficacious in killing anthrax spores. This is made somewhat difficult owing to the fact that the horsehair is tied very tightly in small bundles 2 inches or more in diameter and these must be separated in some way if the disinfection is to be

¹ Great Britain. Forty-fifth Annual Report of the Local Government Board, 1915-16. Supplement containing the report of the medical officer, London, 1917. 77 pp.

properly done. Mention is made of one test in which the bundles were infected artificially with anthrax spores by cutting in each case the cord over the tightest part of the bundle, inserting the infected material in the center, and retying the bundle with iron bands until reduced to its original diameter. In these bundles thermometers were inserted, the bulb being placed centrally in the most highly compressed part of the bundle, and it was found that at a temperature of 225 to 240° F. there was good penetration of heat with the result that the test spores were killed.

WHOLESALE PRICES IN THE UNITED STATES.

Figures compiled by the Bureau of Labor Statistics show that steep increases took place during the first three months of 1917 in the wholesale prices of many commodities. Between January and March the principal farm products increased on an average about 10 per cent and food articles about 7 per cent. Large increases also occurred in the groups of fuel and lighting and metals and metal products. All commodities, taken in the aggregate, increased about 6½ per cent.

Among the commodities showing large price increases during the three months were corn (No. 2, mixed) at Chicago, which advanced from 93¼ cents per bushel early in January to \$1.19 per bushel in the last week of March, and heavy hogs in the Chicago market, which rose from \$10.30 to \$14.95 per 100 pounds in the same time. Other articles increasing greatly in price during this period were prime contract lard at New York (15.40 cents to 20.35 cents per pound), short clear sides bacon at Chicago (15.75 cents to 20 cents per pound), near-by yellow onions at Chicago (\$2.50 to \$5 per sack of 60 to 70 pounds), and good to choice potatoes at Chicago (\$1.60 to \$2.25 per bushel).

No. 2 hard winter wheat at Kansas City ranged from \$1.82 to \$1.95 per bushel in the first week of January, and from \$2.06 to \$2.15 in the last week of March. At Minneapolis the range of No. 1 northern spring wheat was from \$1.85¾ to \$1.99¼ per bushel in the opening week of January, and from \$1.94¾ to \$2.11 per bushel in the closing week of March. In each case, however, considerably lower prices prevailed during February. Patent flour from hard winter wheat ranged from \$8.80 to \$9.10 per barrel at Kansas City in the early part of January, and from \$9.60 to \$10.10 late in March. Prices of standard patent flour from spring wheat at Minneapolis varied from \$8.90 to \$9.25 per barrel and from \$9.70 to \$10.25 per barrel during these two periods. Good to choice corn-fed steers at Chicago sold at prices ranging from \$9.85 to \$10.75 per 100 pounds early in January, and from \$11.85 to \$12.40 late in March.

Between January 1 and March 1 electrolytic copper at New York rose from 29.50 cents to 36.25 cents per pound, pig tin from 43 cents

to 51.50 cents per pound, and spelter from 9.75 cents to 10.875 cents per pound. In the same time North Carolina yellow pine lumber (No. 1 surfaced boards) at Norfolk increased from \$26.50 to \$29.50 per thousand feet and white pine lumber (No. 2 barn) at New York increased from \$37.50 to \$45.50 per thousand feet. Among drugs and chemicals in the New York market opium rose from \$13.50 to \$20 per pound, quinine (manufacturers' quotations) rose from 55 cents to 75 cents per ounce, and crude sulphur rose from \$35 to \$45 per ton in this time.

Some of the few articles showing a drop in price between January and March were eggs, flaxseed, hides, hops, milk, cottonseed meal, and news-print paper. The following table contains index numbers of wholesale prices, by years, from 1890 to 1916, and by months, from January, 1916, to March, 1917, inclusive:

INDEX NUMBERS OF WHOLESALE PRICES, BY GROUPS OF COMMODITIES, 1890 TO MARCH, 1917.

[1916=100.]

Year or month.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and metal products.	Lumber and building materials.	Drugs and chemicals.	House furnishing goods.	Miscellaneous.	All commodities.
1890.....	56	70	73	59	77	71	63	109	76	66
1891.....	60	70	71	59	68	69	65	108	76	66
1892.....	54	63	70	56	63	66	64	106	73	61
1893.....	55	69	70	56	57	67	63	106	75	63
1894.....	48	60	62	52	48	65	58	105	71	56
1895.....	49	58	61	59	52	64	62	99	68	57
1896.....	44	53	59	59	54	62	64	97	66	54
1897.....	48	56	60	52	48	61	62	90	67	54
1898.....	50	60	62	53	48	64	65	96	66	56
1899.....	50	59	65	61	73	70	67	95	68	60
1900.....	56	62	70	70	71	75	68	101	75	65
1901.....	59	63	65	68	66	72	69	112	74	64
1902.....	66	67	66	80	66	76	68	112	76	69
1903.....	62	64	70	92	65	79	67	111	78	69
1904.....	66	68	70	79	60	80	68	106	78	70
1905.....	53	68	72	75	66	84	67	99	78	69
1906.....	64	66	77	78	76	93	66	99	80	72
1907.....	70	70	82	81	81	96	67	99	84	76
1908.....	69	74	75	78	63	91	70	95	80	74
1909.....	79	78	78	76	62	96	71	96	90	79
1910.....	84	79	79	72	63	100	72	94	96	81
1911.....	76	78	76	70	60	100	72	90	86	77
1912.....	82	85	78	77	67	98	71	90	84	82
1913.....	82	79	79	87	67	99	70	91	83	81
1914.....	85	81	78	80	59	96	72	94	81	80
1915.....	86	83	78	75	65	93	80	92	81	81
1916.....	100	100	100	100	100	100	100	100	100	100
1916.										
January.....	89	90	87	88	85	98	98	95	89	80
February.....	89	90	89	89	89	99	101	95	88	90
March.....	91	91	92	90	95	100	103	95	91	92
April.....	93	93	94	91	99	100	105	99	92	94
May.....	95	94	96	90	102	101	107	99	95	96
June.....	95	94	97	91	101	100	105	99	100	96
July.....	96	96	99	91	98	98	100	101	101	97
August.....	103	101	100	92	98	99	92	101	103	100
Sep ^t ember.....	107	106	103	96	100	99	92	101	105	103
October.....	111	111	108	111	102	100	95	104	110	108
November.....	118	119	114	130	108	103	99	104	112	116
December.....	116	115	122	141	125	105	100	104	113	118
1917.										
January.....	120	119	127	147	123	105	101	116	114	122
February.....	123	127	127	154	128	107	103	117	115	126
March.....	132	127	128	157	134	109	106	117	116	130

RETAIL PRICES OF FOOD IN THE UNITED STATES.

Statistics just compiled by the Bureau of Labor Statistics show that the retail price of the principal articles of food as a whole increased 5 per cent between April 16 and May 15, 1917. Flour made the greatest advance—29 per cent. Corn meal advanced 15 per cent; beans, 14 per cent; bread, 13 per cent; and rice, which has heretofore remained at practically the same price, jumped 11 per cent. Two of the 27 articles listed declined in price—onions 36 per cent and butter 9 per cent.

The following table shows the average money prices and the relative prices of the principal articles of food on April 16 and May 15, 1917:

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON APR. 16 AND MAY 15, 1917.

[The relative price shows the per cent that the average price on the 15th of each month was of the average price for the year 1916.]

Article.	Unit.	Average money price.		Relative price.	
		Apr. 16, 1917.	May 15, 1917.	Apr. 16, 1917.	May 15, 1917.
Sirloin steak	Pound	\$0.317	\$0.322	116	118
Round steak	do .....	.289	.296	118	121
Rib roast	do .....	.252	.257	119	121
Chuck roast	do .....	.212	.218	123	127
Plate boiling beef	do .....	.161	.166	126	130
Pork chops	do .....	.306	.306	135	135
Bacon	do .....	.382	.416	133	145
Ham	do .....	.365	.388	124	132
Lard	do .....	.264	.278	151	159
Hens	do .....	.290	.293	123	124
Salmon, canned	do .....	.236	.257	117	127
Eggs, strictly fresh	Dozen .....	.386	.398	103	106
Butter, creamery	Pound .....	.508	.465	129	118
Cheese	do .....	.330	.338	128	131
Milk	Quart .....	.102	.105	112	115
Bread	16 oz. loaf ¹ .....	.075	.085	115	130
Flour	44 lb. bag	1.649	2.134	153	198
Corn meal	Pound .....	.047	.054	137	158
Rice	do .....	.095	.105	104	115
Potatoes	Peck .....	.887	.919	219	227
Onions	Pound .....	.134	.086	273	176
Beans, navy	do .....	.167	.191	152	174
Prunes	do .....	.145	.153	108	114
Raisins, seeded	do .....	.142	.144	110	112
Sugar	do .....	.096	.100	120	125
Coffee	do .....	.299	.302	100	101
Tea	do .....	.551	.557	101	102
All articles combined				127	133

¹ 16 ounces (weight of dough).

A comparison of prices on May 15 of 1917 and those of the same date of the year preceding shows an advance of 39 per cent in the year on all articles combined. Potatoes and flour made the greatest increases, 149 per cent and 122 per cent, respectively. Each of the other articles for which prices are reported also advanced in price.

In the four-year period from May 15, 1913, to May 15, 1917, prices as a whole advanced 56 per cent. Potatoes increased 285 per cent,

or to nearly four times the price in May, 1913; flour increased 164 per cent, or to about two and two-thirds times the May, 1913 price. Sugar advanced 87 per cent and corn meal 82 per cent.

The table below shows average and relative prices for May 15 of this year and of the four years preceding:

AVERAGE MONEY RETAIL PRICES AND RELATIVE RETAIL PRICES OF FOOD ON MAY 15 OF EACH YEAR, 1913 TO 1917.

Article.	Unit.	Average money price, May 15.					Relative price, May 15.				
		1913	1914	1915	1916	1917	1913	1914	1915	1916	1917
Sirloin steak.....	Pound.....	\$0.257	\$0.259	\$0.257	\$0.278	\$0.322	94	95	94	102	118
Round steak.....	do.....	.223	.233	.230	.250	.296	91	95	94	102	121
Rib roast.....	do.....	.199	.201	.199	.216	.257	94	95	94	102	121
Chuck roast.....	do.....	.170	.163	.175	.218	.....	99	95	102	127	
Plate boiling beef.....	do.....	.125	.123	.131	.166	.....	98	96	102	130	
Pork chops.....	do.....	.209	.222	.209	.229	.306	92	98	92	101	135
Bacon.....	do.....	.270	.267	.264	.284	.416	94	93	92	99	145
Ham.....	do.....	.268	.268	.256	.318	.388	91	91	87	108	132
Lamb.....	do.....	.158	.156	.151	.201	.278	90	89	86	115	159
Hens.....	do.....	.222	.227	.215	.241	.293	94	96	91	102	124
Salmon, canned.....	do.....	.....	.....	.198	.200	.257	.....	.....	98	99	127
Eggs, strictly fresh.....	Dozen.....	.263	.266	.263	.281	.398	70	71	70	75	106
Butter, creamery.....	Pound.....	.359	.327	.347	.370	.465	91	83	88	94	118
Cheese.....	do.....	.....	.....	.235	.248	.338	.....	.....	91	96	131
Milk.....	Quart.....	.088	.089	.087	.088	.105	97	98	96	97	115
Bread.....	16-oz. loaf ¹.....	.055	.055	.064	.062	.085	.....	85	98	95	130
Flour.....	4-bbl. bag.....	.809	.798	1.110	.959	2.134	75	74	103	89	198
Corn meal.....	Pound.....	.030	.031	.033	.033	.054	87	92	97	96	158
Rice.....	do.....	.....	.....	.091	.091	.105	.....	.....	100	100	115
Potatoes.....	Peck.....	.239	.292	.....	.369	.919	59	72	58	91	227
Onions.....	Pound.....	.....	.....	.043	.051	.086	.....	.....	87	104	176
Beans, navy.....	do.....	.....	.....	.076	.094	.191	.....	.....	69	85	174
Prunes.....	do.....	.....	.....	.137	.133	.153	.....	.....	102	99	114
Raisins.....	do.....	.....	.....	.125	.126	.144	.....	.....	97	98	112
Sugar.....	do.....	.054	.050	.068	.085	.100	67	62	85	106	125
Coffee.....	do.....	.....	.....	.299	.299	.302	.....	.....	100	100	101
Tea.....	do.....	.....	.....	.546	.546	.557	.....	.....	100	100	102
All articles combined......	.....	.....	.....	.....	.....	.....	85	86	88	96	133

¹ 16 ounces (weight of dough).

ESTABLISHMENT AND OPERATION OF MUNICIPAL PUBLIC MARKETS.

City officials contemplating the establishment of municipal public markets may find suggestive data of considerable value in a recent report issued by the New York State Bureau of Municipal Information, this data being based upon 154 replies to a questionnaire sent out by the bureau to 204 cities each having a population of 30,000 or more, in 72 of which is one or more types of municipal market.¹ Since it appears to be generally agreed that the municipal food problem is one primarily of distribution, the report first makes it clear that a city, after deciding to establish a municipal market and before selecting the type of market and working out the many details of policy

¹ Municipal public markets. Data gathered by the State Bureau of Municipal Information, Report No. 229. New York State conference of mayors and other city officials, Albany, March, 1917. 12 pp. 6 insert tables.

and management, should make a careful study of all matters pertaining to source, transportation, and distribution of food supplies, prices, market and warehouse facilities, the prevention of waste of food brought to the city by reason of lack of modern facilities, and other factors due to purely local conditions.

In making these studies it should be remembered that the system through which the urban food supply generally passes is as follows: Producer, local, county or town buyer or shipper, water or railroad (steam and electric) transportation, motor or horse vehicle transportation, commission merchant or wholesaler, cold-storage plant for some produce, one or more jobbers, retailer, and consumer. To shorten this route by eliminating unnecessary factors, to prevent the abuses of speculation and monopoly, and to provide adequate facilities for the remaining necessary agencies are the problems of the city.

Municipal markets are of four types—terminal wholesale, wholesale, retail, and curb, open, or farmers' markets. The first are those to which railroads or ships or steamboats bring supplies in wholesale quantities and to which retailers can come and buy. They are self-supporting and are found only in large cities. The wholesale markets are intended to enable the retailer to purchase his necessary stock at a convenient time as quickly as possible and at reasonable prices. Among its advantages may be mentioned (1) the elimination of unnecessary transportation by retailers and farmers; (2) elimination of unnecessary middlemen; (3) elimination of high rents; (4) elimination of the duplication of overhead charges; (5) elimination of unnecessary labor; (6) elimination of losses through depreciation by delays and rehandling; (7) reduction of the cost and increase of the efficiency of inspection; and (8) economic and efficient delivery.

The experience of the cities generally, according to the reports received, seems to be that the greatest field for the successful operation of retail markets is the direct selling of perishable goods to the consumer by the producer. The best opportunity for retail markets seems to be offered by the smaller cities which have a producing area in the vicinity and to which the greater part of the food supply does not have to be hauled from any far distant point. The service which a city should expect of a retail market is thus summarized in the report:

(1) It should give to patrons, who will pay cash for their purchases and carry them home, a dollar's worth of actual products for a dollar spent. When a buyer does not demand or use credit and delivery service he should not be charged for it; (2) the prices should also reflect to the consumer the saving which is made possible to the dealer through low rent of his stall and equipment, as well as other reductions in overhead expenses; (3) patrons should be able to find at the market a larger and fresher assortment of food products than the average private establishment offers; (4) due to the possibility of close official inspection the consumer has a right to look for increased protection in quality, weight, and measure.

The advantages of the curb market are that it can be started with little trouble and expense and can be easily moved if the first location is found to be faulty. On the other hand, it has the disadvantage of affording little or no protection, sanitary or otherwise, to products, does not shelter the seller or his patrons from the elements, and affords satisfactory service only during the months of production.

The report emphasizes the importance of care in the selection of a market site, for "many of the failures of public markets have been the direct result of poor location"; makes suggestions as to market construction, equipment, and management; and comments to some extent on whether or not a municipal market should have credit, delivery, and telephone services, stating that those who oppose these services assert that they destroy the fundamental principle for which a market is established, i. e., "the saving of money to the public by minimizing all sources of expenses in the way of costly service." Most of the reports received favored a delivery system so conducted as to place the expense of it only on those who demand the use of such service. The telephone was found to be in general use in public markets. General opposition, however, was registered against the credit system. The report suggests rules that have been adopted by cities for the operation of their markets, and then proceeds to give a statistical summary of the facts developed by the questionnaire to which reference has been made. Without giving the details of this summary, it may be stated that 1 terminal, 14 retail, 16 wholesale and retail, and 19 curb markets were operated in 50 cities having one type of market exclusively, and that of these 50 markets, 26 were reported as being self-sustaining, 10 as not self-sustaining, while 14 made no report. Most of the self-sustaining markets (12) were of the combined wholesale and retail type, a type not heretofore noted. The data received from the cities furnishing information show—

1. That all types of markets, except wholesale-terminal markets, have had a fair trial in American cities.
2. That the type of market selected depends entirely upon local conditions, and that under certain conditions more than one type of market can be operated in a city.
3. That the majority of markets are controlled by the council.
4. That the chief source of revenue is from the rental of stalls, booths, and spaces, and that some revenue can be obtained from other sources.
5. That the majority of cities prefer to rent their spaces in their public markets.
6. That all types of public markets, except the wholesale-terminal market, which has not been given a fair test, can be made self-sustaining.
7. That inefficient management, poor locations, and lack of patronage are the chief reasons for the financial loss of those markets which are not self-sustaining.
8. That the majority of markets are under the management of a market master.
9. That the majority of cities operate their markets six days a week.

10. That the majority of markets are well patronized by producers and consumers, and that of those which are not well patronized the majority are curb markets.

11. That in a majority of cities the prices of produce in the municipal markets are at least somewhat lower than those in the retail stores, and that in almost one-half of the cities the prices are considerably lower. In some cities the difference is startling.

12. In a majority of cities the municipal market has a tendency to keep down the prices in the retail stores.

13. Fifty-five per cent of the cities reporting say their markets are a success and 17 per cent, that their activities are a failure. Mismanagement and poor location and lack of patronage, which may be due to both the others, seem to be the cause for the failure of those which are unsuccessful.

14. That a public market has many advantages.

15. Based upon their own experience, 60 per cent of the cities advise a municipality to establish municipal markets as one means to reduce or prevent the increase of the cost of living. Eleven per cent advise against the establishment of a market. Two say action depends entirely upon local conditions.

STATE VERSUS MUNICIPAL MARKETS.

About two years ago the California Legislature enacted a law to provide for the creation and organization of a State commission market "to carry on the business of receiving from the producers thereof the agricultural, fishery, dairy, and farm products of the State of California and selling and disposing of such products on commission." Recent criticisms of the administration of this law have led Harris Weinstock, State market director, to make a statement¹ of his position and define what he conceives to be necessary to a proper administration of the law, giving his reasons why the establishment of market facilities as contemplated by the law is a municipal rather than a State function. He contends that the best results can be achieved by encouraging producers to keep on producing, by getting more people to produce, by cutting out speculation in farm products, and by collective marketing, and tells why, to effectuate these ends, he has thought it unwise and impracticable to establish State markets, lending his encouragement rather to the establishment of city markets in order to bring together producer and consumer for their common good.

As well ask the State to sweep the streets or light the lamps or maintain the local fire departments of its towns and cities as to ask the State to conduct its municipal markets.

The statement shows how the energies of the State commission market have been directed toward assisting in organizing farmers into market associations in order better to determine by collective action at what markets and in what way their products can best be

¹ Statement of Harris Weinstock, State market director, in answer to criticisms of Senator William E. Brown, of Los Angeles, relative to the administration of the California State market law. San Francisco, March, 1917. 48 pp.

handled. By accomplishing this, it is pointed out, the costs of distribution have been cut down, many market abuses have been wiped out, speculation has been eliminated, and prices in the interests of the consumer have been stabilized, as the following table would seem to indicate:

COMPARATIVE SAN FRANCISCO RETAIL PRICES OF PRODUCTS RAISED BY UNORGANIZED AND ORGANIZED FARMERS, MAR. 1, 1915, AND MAR. 1, 1917, SHOWING ALSO PER CENT OF INCREASE OR DECREASE.

Product.	Unit.	Price on Mar. 1—		Per cent of increase (+) or decrease (-).
		1915	1917	
UNORGANIZED FARMERS.				
Onions.....	Pound.....	\$0.02½	\$0.15	+500.0
Potatoes, Salinas.....	Pound.....	.02½	.06	+166.6
Beans, small white (navy).....	Pound.....	.08½	.15	+ 80.1
Beans, red Mexican.....	Pound.....	.08½	.12½	+ 50.1
ORGANIZED FARMERS.				
Raisins, fancy seeded.....	Pound.....	.10	.11½	+ 12.5
Raisins, 5 crown.....	5 pounds.....	1.10	1.00	- 9.1
Do.....	20 pounds.....	3.25	3.00	- 7.7
Dried peaches, unpeeled extra.....	Pound.....	.15	.15	-----
Dried peaches, peeled No. 1.....	Pound.....	.30	.27½	- 8.3
Eggs, extra.....	Dozen.....	.27½	.35	+ 27.2

Taking the items as a whole, an increase of 126.5 per cent is indicated in the prices of products of unorganized farmers, and a decrease of 5.6 per cent in the prices of products of organized farmers.

The aim of the State market director in the interest of producer and consumer is through organization to bring about the marketing conditions in the unorganized farming activities that the foregoing comparative prices show exist as a rule in the organized farmers' activities.

The benefits of cooperative marketing are summarized in the following paragraphs taken from the statements:

Cooperative marketing stands for standardizing qualities, so that only products fit to eat are allowed to go to market.

Cooperative marketing stands for intelligent and more economic production, so that the cost of production is lessened.

Cooperative marketing stands for better packing, so that products reach the consumer in better condition.

Cooperative marketing plans for collective buying of all things needed in production and in preparing products for market, thus again lessening costs.

Cooperative marketing stands for eliminating waste in the cost of distribution.

Cooperative marketing spells the death knell of speculation in food products, thus stabilizing prices.

Cooperative marketing means making national advertising possible.

The consumer must inevitably fall heir to his fullest share of all these savings, benefits, and advantages, as has been demonstrated in the California citrus industry, the raisin industry, the peach industry, the almond industry, the walnut industry, and others; not any of which movements have ever put 1 cent of unfair burden on the consumer; but, on the contrary, have been the means of furnishing him with products, the best of their kind, at the lowest prices.

COST OF LIVING IN DALLAS, TEX.¹

Early in February, 1917, the Dallas Wage Commission was appointed by the mayor to obtain data on the cost of living to be used by the city board of commissioners as a guide in determining what wage advance to city employees might be justified. Complete information was obtained from 50 families, the heads of 17 of these receiving salaries of less than \$60 per month; 11, \$60 to \$70; 4, \$70 to \$80; 15, \$80 to \$90; and 3, \$90 to \$100. Twenty-nine were city employees and 21 were factory employees. The annual incomes of these families averaged \$962.83. The following table shows for each specified item the average annual expenditures, the estimated safe normal living cost, and the lowest estimated amount necessary for "bare existence," together with the per cent of increase of expenditures over 1914, based on data obtained in the Dallas survey.

AVERAGE ANNUAL EXPENDITURES, ESTIMATED SAFE NORMAL LIVING COST, AND LOWEST ESTIMATED AMOUNT NECESSARY FOR "BARE EXISTENCE," WITH PER CENT OF INCREASE IN EXPENDITURES OVER 1914, BASED ON DATA OBTAINED IN THE DALLAS SURVEY.

Item.	Normal living cost of family of 5, in 1914.	Average annual expenditure, 50 families, 1917. ¹	Per cent of increase over 1914.	Average safe normal living cost. ²	Lowest estimated amount necessary for "bare existence." ^{3, 2}
Food.....	\$331.50	\$510.67	54.0	\$481.00	\$360.00
Clothing.....	100.52	142.66	41.9	136.00	136.00
Rent.....	164.58	164.58	.....	164.58	144.00
Maintenance and operation ³	93.92	103.31	10.0	103.31	50.00
Medical expenses.....	39.60	60.06	51.7	43.56	12.00
Insurance, recreation, etc. ⁴	57.46	57.46	.....	57.46	36.00
Miscellaneous ⁵	87.10	95.81	10.0	95.81	9.00
Total.....	\$74.68	1,134.55	29.7	1,081.72	747.00

¹ Based on families averaging 4.8 members.

² Based on families averaging 5 members.

³ Includes light, fuel, water, ice, laundry, and telephone.

⁴ Includes also church, charity, fraternal, and other organizations.

⁵ Includes household effects, seeds and tools, car fare, repairs, barber, reading, and education.

It is stated that 39 families showed a deficit averaging \$20.25 a month, and 10 families showed a surplus averaging \$8.86 a month. The average annual deficit reported by the 50 families was \$171.72. These facts prompted the commission to conclude—

1. That with rapidly increasing food and clothing costs, the families are accumulating debts;
2. That wage and chattel loans are made and concealed; and
3. That relatives are giving aid in money and supplies, which is not divulged.

These are unvarnished facts. They do not suggest wise use of wages, and it is admitted that few households are well managed. In many instances, family purchasing is poorly conducted. Food, clothing, and fuel are bought not only

¹ Dallas (Texas). Report of survey committee to the Dallas Wage Commission and submitted by them to the honorable mayor and board of commissioners of the city of Dallas, Apr. 25, 1917. [Dallas, 1917.] 16 pp.

in ignorance of the right things to buy, but of how to buy most economically. The wastage in even common necessities sometimes averages 20 per cent. To these faults must be added the cost of things, not only unnecessary, but sometimes seriously harmful.

COST OF LIVING IN WORKMEN'S FAMILIES IN PORTUGAL.¹

On October 18, 1916, the minister of labor and social welfare addressed circulars to various workmen's associations of the Republic, inclosing schedules to be distributed to the heads of workmen's families who were requested to furnish data relative to earnings and expenses as shown by the family budget. Of the 7,500 schedules (*questionarios*) distributed by means of 350 associations, 756 were returned, 538 of which were found to furnish sufficient data to be of use.

Data were requested as to the occupation of the head of the family, size of family, periodic (weekly, monthly, or yearly) earnings of each member, and other income; expenditures for 13 articles of food, for heat, water, light, rent, and clothing and for other necessary items.

The following table shows for families having less than four members, and for those having four or more, the average weekly income and average weekly expenditures for various classes of articles, by classified income per family:

WEEKLY EXPENDITURES OF FAMILIES FOR SPECIFIED CLASSES OF COMMODITIES, BY CLASSIFIED INCOME.

Item.	Expenditures of families having a weekly income of—											
	Less than \$2.16	Over \$2.16 to \$3.24	Over \$3.24 to \$4.32	Over \$4.32 to \$5.40	Over \$5.40 to \$6.48	Over \$6.48 to \$7.56	Over \$7.56 to \$8.64	Over \$8.64 to \$9.72	Over \$9.72 to \$10.80	Over \$10.80 to \$11.88	Over \$11.88 to \$12.96	Over \$12.96
<i>Families having less than 4 members each.</i>												
Food.....	\$1.56	\$2.14	\$2.45	\$3.17	\$3.82	\$4.34	\$5.72	\$5.97	\$6.98	\$6.60	.....	\$7.78
House rent.....	.23	.24	.32	.39	.42	.40	.43	.51	.57	.62	.....	.86
Clothing.....	.37	.31	.34	.44	.48	.54	.39	.43	.80	.79	.....	.89
Light and fuel.....	.28	.23	.43	.37	.39	.45	.47	.81	.76	.64	.....	.81
Other.....	.18	.20	.23	.35	.40	.29	.29	.47	.57	.44	.....	.94
Total.....	2.62	3.09	3.77	4.72	5.51	6.02	7.30	8.19	9.68	9.09	.....	11.28
Average income.....	1.81	2.72	3.70	4.83	5.92	6.96	7.87	9.07	10.50	11.22	.....	13.50
Average number of persons per family.....	2.6	2.3	2.4	2.5	2.8	2.8	2.2	(a)	2.3	3.0	.....	2.0
<i>Families having 4 or more members each.</i>												
Food.....	2.29	2.35	2.90	3.82	3.87	4.60	5.80	6.14	7.31	7.69	8.00	9.53
House rent.....	.24	.27	.35	.48	.45	.50	.52	.57	.56	.65	.75	.85
Clothing.....	.39	.31	.36	.39	.49	.56	.46	.60	.81	.94	.97	.97
Light and fuel.....	.31	.24	.45	.38	.47	.50	.68	.84	.77	.74	.77	.88
Other.....	.17	.17	.23	.32	.32	.26	.43	.44	.44	.53	.64	.94
Total.....	3.40	3.34	4.29	5.39	5.58	6.42	7.89	8.59	9.89	10.55	11.13	13.17
Average income.....	1.78	2.69	3.70	4.83	5.88	6.92	7.96	9.05	10.05	11.65	12.25	16.75
Average number of persons per family.....	6.0	4.8	5.2	5.5	5.7	5.1	5.2	6.5	4.9	4.0	6.6	7.1

^a Reported 7, evidently an error.

¹ Boletim da Previdência Social, Ano 1, No. 1 and No. 2. Lisbon, 1917.

The average income for all families was 6.89 dollars Portuguese (\$7.44), the average expenditure was 6.23 dollars Portuguese (\$6.73), and the average size of the families was 4.3.

Bulletin No. 1 gives highest, lowest, and average retail prices of 20 articles of food, as reported from three cities, for the months of July, 1914, November, 1914, and May, 1915, with the increase in price between the two last dates. The same bulletin gives highest, lowest, and average prices for October and September, 1916, as reported for 21 localities, and average prices reported for October, 1916, in cities of 10,000 population. Comparable data are found in Bulletin No. 2 for November and December, 1916, and January, 1917.

From these data the following table has been prepared:

RETAIL PRICES OF FOOD IN PORTUGAL, JULY, 1914, NOVEMBER AND DECEMBER, 1916, AND JANUARY, 1917.

Article.	Lisbon.				Coimbra.				Oporto.			
	July, 1914	November, 1916	December, 1916	January, 1917	July, 1914	November, 1916	December, 1916	January, 1917	July, 1914	November, 1916	December, 1916	January, 1917
Rice.....lb.	6.47	9.79	9.79	10.78	6.22	8.82	9.31	9.31	6.96	9.79	10.29	10.29
Oil.....lb.	15.29	17.15	16.17	18.62	15.58	17.15	18.13	18.62	13.43	17.15	18.62	20.09
Codfish.....lb.	12.5	23.52	23.52	24.01	12.64	22.05	23.03	24.5	10.58	21.08	22.54	23.03
Potatoes.....lb.	1.37	2.94	3.43	3.43	1.66	2.45	2.45	2.94	1.96	2.94	2.94	3.43
Mutton.....lb.	11.61	16.66	16.66	19.11	8.43	12.25	12.25	12.74	10.88	17.64	17.64	17.64
Fork, fresh.....lb.	16.46	27.93	27.44	26.46	15.29	23.03	22.54	24.01	15.68	30.38	30.87	31.36
Beef.....lb.	12.38	22.05	21.56	24.01	12.10	17.72	17.15	20.58	14.21	21.56	22.54	22.54
Sausage, meat.....lb.	26.17	39.20	38.71	38.22	28.86	39.20	40.67	40.67	34.30	49.49	47.53	47.53
Beans, white.....qt.	11.54	11.89	11.89	11.89	10.35	9.52	10.70	10.70	5.95	9.75	10.70	10.70
Beans, colored.....qt.	12.49	11.89	11.89	11.89	9.40	9.52	9.52	15.46	5.35	8.80	9.52	9.52
Beans, dwarf.....qt.	10.47	9.52	9.52	9.52	8.21	7.14	8.33	8.33	4.76	7.14	7.14	7.14
Bread:												
Corn.....lb.	2.65	4.41	4.90	4.90	3.04	4.41	4.41	4.90	1.37	3.92	3.92	3.92
Wheat, 1st grade.....lb.	4.41	11.27	11.76	11.76	4.85	10.29	10.78	10.78	5.24	11.76	13.51	12.25
Wheat, 2d grade.....lb.	3.92	5.39	5.88	6.37	4.67	7.84	7.35	7.84	4.67	6.86	6.86	6.86
Bacon.....lb.	16.17	29.89	29.40	27.33	16.91	23.52	24.99	24.99	20.58	30.87	32.34	31.85
Coffee.....lb.	30.48	30.87	30.87	32.83	36.26	40.67	41.65	39.20	32.83	39.20	38.22	39.20
Sugar.....lb.	12.59	20.58	20.58	20.09	12.94	22.03	22.54	22.05	12.25	24.01	22.05	21.56

NEW MINIMUM WAGE RATE BASED ON COST OF LIVING FOR UNSKILLED LABORERS OF NEW YORK CITY.

In February, 1915, the bureau of statistics of New York City made a study of the cost of living for an unskilled laborer's family of five persons, consisting of man, wife, and two boys and one girl, aged, respectively, 13, 6, and 10 years, for the purpose of obtaining a basis for its recommendation, subsequently submitted to the committee on salaries and grades of the board of estimate and apportionment, that the wages of sweepers in the street-cleaning department be fixed to range from \$720 to \$840 per year, with increases of \$24 after not less than one year in the service. The report of the investigation which resulted in the adoption of this schedule was noted in the MONTHLY REVIEW for October, 1915 (pp. 18 to 21). At that time market con-

ditions were quite normal and it seemed possible to obtain satisfactory unskilled labor at rates below \$2 per day. Since that time, however, it is reported that the rising cost of living has forced these laborers to ask higher wages or to seek employment offering better inducements, leading the street-cleaning department in February, 1917, to raise the minimum rate for sweepers to \$792 per year, with similar increases in the minimum rates for other employees.

In the meantime a survey was made by the bureau of personal service of the board of estimate and apportionment for the purpose of revising the original study of the cost of living in accordance with the abnormal rise in the prices of necessities, and in the report of this survey,¹ issued in February, 1917, it is stated that the conclusions "indicate that the cost of living for the laborer's family of five persons, selected in the original report, has risen from \$840 to approximately \$980; that is, about 16 $\frac{2}{3}$ per cent. It is not, of course, to be assumed that the present conditions are likely to continue indefinitely," so that the range of wages recommended for sweepers was fixed at \$792 to \$888, with similar increases for other groups of employees. For instance, the maximum for drivers and skilled laborers was fixed at \$936; for bridge tenders, caretakers (men), and elevator operators, \$984; for loaders, \$960; and for motor truck drivers, \$996.

The minimum salaries necessary properly to support or maintain a family of five, as disclosed by the data obtained in February, 1915, and in February, 1917, are set forth in the following table:

MINIMUM EXPENDITURES NECESSARY PROPERLY TO SUPPORT OR MAINTAIN AN UNSKILLED LABORER'S FAMILY OF FIVE PERSONS IN NEW YORK CITY IN FEBRUARY, 1915, AND FEBRUARY, 1917.

Item.	1915 ¹	1917
Housing.....	\$168.00	\$168.00
Car fare.....	30.30	30.30
Food.....	383.81	492.38
Clothing.....	104.20	127.10
Fuel and light.....	42.75	46.75
Health.....	20.00	20.00
Insurance.....	22.88	22.88
Sundries:		
Papers and other reading matter.....	5.00	5.00
Recreation.....	40.00	40.00
Furniture, utensils, fixtures, moving expenses, etc.....	18.00	18.00
Church dues.....	5.00	5.00
Incidentals.....	5.00	5.00
Total.....	844.94	980.41

¹ These figures are taken from the report under review. In the report of the investigation made in February, 1915, the amount for food is given as \$380; for clothing, \$104.20; for fuel and lighting, \$42.75 making a total of \$840.18 for all items listed in the table.

In securing facts as to the increased cost of food for 1917 the same list of foodstuffs used in 1915 was again priced at markets, push

¹ Report on the increased cost of living for an unskilled laborer's family in New York City, prepared by the bureau of personal service of the board of estimate and apportionment [New York City], February, 1917. 32 pp.

carts, and stores of the same type as before and the average amount of increase ascertained. From this investigation it was learned that the cost of exactly the same foods was, last February, \$9.47 per week, or approximately \$2.09 per week more than in February, 1915. Data as to the cost of clothing were obtained in the same manner.

The report contains several appendixes setting forth minimum food and clothing budgets for one week for families of five with current prices; data on prevailing rentals and on cost of gas used for fuel and lighting; selected family budgets in Manhattan and Brooklyn, and a budget based on first-hand information suggested by the social-service bureau of the Bellevue Hospital; and tentative family budgets submitted by local workers of the United Hebrew Charities.

ESTABLISHMENT OF DEPARTMENTS OF LABOR IN FOREIGN COUNTRIES.

ARGENTINA.¹

The Province of Buenos Aires on December 6, 1916, established by legislative act a department of labor. The department is charged with the preparation of regulations relative to labor; investigating, collecting, classifying, and publishing, periodically, data relative to all classes of labor in the Province, and in general to industrial, social, educational, and sanitary conditions of laborers; with the organization and direction of an inspection service to insure compliance with laws and administrative regulations relative to labor; with maintaining a consulting office to assist laborers in the collection of unpaid wages, and in other matters pertaining to labor, etc.

It shall collect data relative to wages, cost of living, industrial accidents, insurance, industrial hygiene, agricultural labor, labor market, home conditions, labor disputes, etc., and publish such information in special or periodical bulletins.

Employers are required, under penalty for failure, to submit data and reports as demanded by the department.

Public administrative officers, provincial and municipal, are required to furnish data and assist the department in its work.

Inspectors are charged with the duty of inspection and supervision of laws enacted by the national congress or by the provincial legislature. Inspectors are authorized (during working hours) to enter any industrial or commercial establishment. Penalties are provided for any interference by the management.

The names of persons, establishments, or societies to whom or to which data refers must not be published.

Provisional appropriation for expenses is made.

¹ Boletín del Instituto de Reformas Sociales. Madrid, April, 1917, p. 407.

PORTUGAL.¹

Following is a summary of the provisions of the law enacted in Portugal on March 16, 1916, establishing a Minister of Labor, and of the decree of April 21, 1916, organizing the new department.

Articles 1 and 2 name the different bureaus and divisions of the department, as follows: Labor, social welfare and subsistence, industrial inspection, social-welfare inspection, administration of postal and telegraph services, administration of the operation of State railroads, supervision of the port of Lisbon, division of railroad improvement and extension. To act in connection with the minister, the following councils are established: Superior council of labor, superior council of social welfare, administrative council on State railroads, administrative council of the port of Lisbon, and a tariff council.

Subsequent articles describe in detail the specific duties of each bureau or division.

The bureau of labor is divided into two sections; the first consists of three divisions. The first division embraces inspection of unhealthy, obnoxious, and dangerous establishments; office equipment, machinery, and hoists; boiler testing; generators, and calculating of motor force; initiation of special studies on determined industries, conditions of labor, and production in all classes of industrial establishments; wages in industry and metrological service. The second division regulates requirements as to hygiene, health, and safety, and accident prevention and occupational diseases, and has supervision over the laboratory of occupational hygiene, and the maintenance of an occupational prophylactic museum. The third office has charge of investigations, industrial statistics, collation of data submitted by other units of the labor bureau, foreign correspondence, publication of the Official Labor Bulletin, etc.

The bureau of social welfare is divided into two sections, each of which is subdivided according to the work assigned. This bureau publishes the Bulletin of Social Welfare.

The work of each bureau, administrative office, council, and minor division is clearly specified in the 98 articles of the law.

RUSSIA.

[Reprinted from the British Board of Trade Labor Gazette, May, 1917.]

A recent issue of the journal of the Russian Central War Industry Committee² states that at the council of ministers held on the 9th (22d) March last the proposal of the minister of trade and industry,

¹ Boletim de Providência Social, Ano 1, No. 1, 1916, p. 65. Lisbon, 1917.

² Izvestiya Tsentralnovo Voyenno-Promyshlennovo Komiteta, 31st March, 1917 (N. S.) Petrograd.

with regard to setting up a department of labor in his ministry, was accepted.

The special committee appointed to control the new department will include an equal number of workmen and employers. It will consist of the following: Eight representatives of the council of workmen's deputies, two members from each of the Petrograd and Moscow societies of manufacturers, and four representatives from the council of the associations of industry and trade; also two members of the all-Russian county and municipal assemblies and two members of the central war industry committee. The minister of trade and industry will act as president, and he may invite officials of the factory and mining inspectorate, or other experts, to take part in the proceedings in a consultative capacity.

FEDERAL AND STATE AIDED VOCATIONAL EDUCATION.

The National Society for the Promotion of Industrial Education has recently issued a pamphlet¹ containing a brief history of the efforts which have been made to obtain Federal aid for vocational education, culminating in the passage of the Smith-Hughes Vocational Education Act, which went into effect on July 1, 1917, and which provides Federal grants in cooperation with equal State grants, for salaries of teachers and for training of teachers of agricultural, trade, and industrial subjects and home economics. The pamphlet also contains a list of State boards for administering the Vocational Education Act; a statement of the extent of State-aided vocational education; a list of schools training vocational teachers, together with the scope of the courses offered; and new opportunities which have recently been developed for industrial education.

It appears that when the Federal act was passed 8 States² already had systems of State-aided vocational education below college grade, shortly after the bill was approved by the President 29 States³ passed laws accepting the provisions of the act, and 7 States,⁴ at the time of the issuance of the publication under review, had bills pending in their legislatures. In Idaho, New Mexico, and Rhode Island bills to accept the provisions of the act failed to pass. The Iowa and Missouri laws provide that prevocational as well as vo-

¹ Federal and State aided vocational education. The National Society for the Promotion of Industrial Education, 140 West 42d Street, New York City. May, 1917. 59 pp.

² Connecticut, Indiana, Massachusetts, New Jersey, New York, Pennsylvania, Virginia, and Wisconsin.

³ Arizona, Arkansas, California, Colorado, Delaware, Indiana, Iowa, Kansas, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nevada, New Hampshire, New Jersey, North Carolina, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Utah, Vermont, Washington, West Virginia, and Wyoming.

⁴ Connecticut, Florida, Illinois, New York, Pennsylvania, Texas, and Wisconsin.

educational schools shall be entitled to State and Federal aid. In citing the provisions of the various State acts it is noted in conclusion that—

The indefinite possibilities of variation and interpretation of the purposes of the act in the 48 States show the need of a clearing house for discussion, publicity, and for the development of a clear understanding of the best means of realizing the purposes of the act.

In noting the extent of State-aided vocational education it is pointed out that where such system has prevailed three types of school—all day, part time, and evening—have been provided to fit for profitable employment in industry, on the farm or in the home. Approximately one-half the net cost of maintenance is met by the State, the grant being given as reimbursement only for work satisfactorily done, and this reimbursement is conditioned on a requisite minimum standard of efficiency in plant, equipment, methods of instruction and organization, courses of study, and qualifications of teachers. The following statement shows the extent of State-aided vocational education in 1915-16:

EXTENT OF STATE-AIDED VOCATIONAL EDUCATION IN SIX STATES IN 1915-16.

State.	Type of school.				Teachers.	Total enrollment.
	All day.	Part time.	Evening.	Others.		
Indiana.....	19	33	61	.....	259	11,694
Massachusetts.....	24	.....	35	2 17	669	8,322
New Jersey.....	15	1	28	8 4	(⁴)	11,407
New York ⁵	45	.....	64	6 57	337	29,747
Pennsylvania.....	23	.....	43	7 351	8 372	47,465
Wisconsin.....	24	.....	28	9 38	(⁴)	36,701
Total.....	150	34	259	467	1,637	145,336

¹ Virginia and Connecticut not reported.

² 16 agricultural schools and departments; 1 continuation school.

³ County vocational schools.

⁴ Not reported.

⁵ This is for 1913-14. The report notes 209 vocational schools in New York, but also gives the distribution here indicated, which makes a total of 166. The discrepancy is not explained.

⁶ 10 continuation schools; 47 agricultural schools.

⁷ Continuation schools.

⁸ Teachers in continuation schools only; others not reported.

⁹ 11 commercial schools; 27 continuation schools.

As already stated, the report presents a list of schools which are training those desiring to become vocational teachers, the courses for trade workers being offered in both public and private schools under (1) the all-day school plan, (2) the Saturday-morning plan, (3) the evening-school plan, and (4) the summer-school plan. Many State schools, colleges, and universities, as well as private institutions, have for some time provided courses in the practical arts, but "instruction in the teaching of distinctly vocational subjects is a comparatively new development." Courses are needed to train teachers how to analyze the fundamental principles of their trade, how to organize the subject matter, and how to present it to their pupils.

That employers are recognizing the need for industrial training which has been emphasized by the scarcity of labor, high wages, and competition for workers resulting from the war, would appear to be evidenced by the new opportunities for such training which employers and educators are working out in different parts of the country. Thus, it is noted that a plant in Wisconsin permits a part of each day to be devoted to instruction within its plant, the company paying full wages during the time so occupied. A vocational class in carding is conducted in one of the mills at Lowell, Mass., the mill providing equipment, material, and taking care of the product, and paying regular rates to those attending the class. Another company has offered to turn over to the trustees of the Holyoke Vocational School, Holyoke, Mass., one of its plants to be used as a school for paper making. Opportunities are being offered for training for the shoe and leather industry, and in tanneries. An Iowa concern has presented electrically operated sewing machines to the vocational department of the high school so that pupils may learn their use in the making of sleeping wear. An apprenticeship school is in operation in Bridgeport, Conn., and the Springfield (Mass.) Vocational School, in cooperation with the typographical union, is offering opportunity for boys to learn the printing trade.

Not a part of the pamphlet just reviewed, but pertinent in this connection, is an address on part-time education in household arts by Cleo Murtland, delivered in New York City on July 4, 1916, before the home economics session of the National Education Association conference, and printed in the *Journal of Home Economics* for February, 1917 (pp. 51-58). Although household arts subjects are well established in the elementary and high school curricula, where a great problem in the education of girls is being met, it is believed that if these arts of home making and housekeeping are to reach their highest ideals and their fullest possibilities, they must go far beyond the instruction that may be given in the school-room to inexperienced young people. This opportunity would seem to be offered by part-time or after-school training, which would reach—

(1) The girls who remain in the home and assist in the household duties—girls who do not become wage earners outside of the home; (2) girls who become wage earners and are removed from any but incidental participation in household work which under right conditions furnishes the best kind of training; and (3) women engaged as home makers—the wives and mothers.

The second group "is the most difficult one to reach with part-time instruction, and their need for instruction in the theory and practice of household arts is perhaps most pressing. * * * This group will not be reached * * * until legislation makes part-time school attendance compulsory. Industry can not be expected to

pay for instruction which has no bearing on the industrial efficiency of the workers." The only avenue which appears to be open to these girls is the evening school. The housewife will find part-time instruction particularly suited to her needs, for she has opportunity to put into practice the theories gathered in the class.

Emphasis is placed on the necessity of recognizing that the home is not wholly apart from the industrial and commercial life, but that "the home must compete with industry in the productive work of the home which is duplicated in industry. * * * Household arts instruction will profit greatly by making use of right industrial methods," and commercial standards of work. For instance, millinery courses should be given with trade standards as the ideal, for the housewife who wishes to make her own hats desires to have them as attractive and well made as those of her neighbor who buys them from the milliner:

Household arts education taught by this part-time method will demand teachers of broad social interest, women who can bend their scientific knowledge and specialized training to the development of education for service. * * * A first-hand knowledge of home problems will constitute an important part of their training; the ability to meet the home-making situations intelligently and to impart instruction relative to them will replace the formal methods we now have. Household arts under this new order has its great opportunity.

ANNUAL MEETING OF THE NATIONAL SOCIETY FOR THE PROMOTION OF INDUSTRIAL EDUCATION.

The program of the tenth annual meeting of the National Society for the Promotion of Industrial Education, held at Indianapolis, Ind., February 21 to 24, 1917,¹ was grouped under a number of general topics, including (1) the Indiana survey,² (2) educational problems confronting vocational schools, (3) economic background for vocational education, (4) vocational home making, (5) prevocational work, and (6) agencies promoting vocational opportunities for women.

In the papers under the second section, it was brought out that educational provisions for preparing boys and girls to enter the industries contemplate, first, the perfection of the organization and classification of the schools, and the arrangement of the work according to the needs of the various groups of children; second, provision for the training of vocational teachers; third, a survey of the local community to determine what its particular needs are and then

¹ National Society for the Promotion of Industrial Education. Bulletin No. 24. Proceedings tenth annual meeting, Indianapolis, Feb. 21-24, 1917. 140 West Forty-second Street, New York, May, 1917. 311 pp.

² An account of the Indianapolis, Evansville, and Jefferson County surveys will be found in the MONTHLY REVIEW for March, 1917, pp. 469 to 476, and an account of the Richmond survey appears in the present issue, pp. 149 to 152.

providing physical means—the plant, buildings, equipment, tools, apparatus, etc., for carrying on the work. It was also suggested that continuation and part-time schools are necessary to improve the status of those already in industry, and that to be effective there must be utmost cooperation between employers and the schools; that the way to handle the problems of poverty, etc., now met by issuing work permits to school children, is not by permitting these children to work but by giving the mothers a regular income from the State; that parents, employers, and labor organizations should cooperate with one another in securing for the apprentice the education and training that will fit him for his occupation in life, and to make the apprenticeship system a success cooperation between the shop and the school is absolutely necessary; and that vocational education is offering a great opportunity for the Negro to develop into a more productive workman and thus meet the demands of industry.

Addresses at the banquet were made by Chas. A. Prosser, director of the Dunwoody Institute, Minneapolis, Minn., who traced the history of the vocational education movement and spoke of its future possibilities, and by Clarence H. Howard, Commonwealth Steel Co., St. Louis, who emphasized the value of fellowship in the handling of workmen.

As yet there appears to be little that is substantial in the way of vocational education for children from 14 to 17 years of age, most of whom drop out of school during this period. The importance of such provision was emphasized in an address setting forth some suggestions for the vocational education of these children, the point being made that even partial vocational training at this time of life is infinitely better than none, and that specialized, intensive, short-unit, all-day courses for the specialized callings adapted to the early juvenile, the early adult and the late adult periods of life, are extremely important, at least until legislation providing for compulsory continuation school attendance is available.

The necessity of adapting industrial schools to different types of community, and of obtaining data on the marrying age of women, the number of women in industry who have children, the length of time that the women remain in industry before marriage, and the age at which they come back into industry, was brought out as furnishing a basis for arranging courses of vocational study.

What employers have a right to expect of training course graduates was suggested in two addresses; this includes "skill such as needed in their workrooms without fussy exactness; workers who can adapt themselves to workroom needs and conditions, who are willing to do what is asked of them, and who will stick to the job; such qualities as loyalty to the house, attention to orders, interest in their work, and concentration upon it"; also the right attitude toward

work, knowledge of the work to be done, courtesy, and activity and initiative. The continuation school, it was suggested, may be the place for the development of all of these qualities, for it affords training first in citizenship and second in the various callings, this trade training being classified as (1) that which aims to assist in the choice of a calling (prevocational training and vocational guidance), that which aims to give a preparation for entrance upon a chosen calling (trade preparatory training), and training in a calling after choice has been made and participation in that calling has begun (trade extension training). In this connection the following recommendations were submitted:

1. That State-wide compulsory continuation schools should be provided for all employed minors of 14 to at least 16 years of age; four hours a week.

2. That the best results will be secured from compulsory continuation schools when the opportunity for attendance is continuous throughout the school year, or for at least 48 weeks.

3. That minors 14 to 16 years of age who have left the regular public schools and are temporarily out of employment, should be required to attend the compulsory continuation schools for the full session each day during their unemployment.

4. That municipalities having a population of 50,000 or more should be required to maintain the three types of schools * * * [general education, prevocational education (for choice of calling), and vocational education (for training in the chosen calling)], and that all other municipalities should be permitted to maintain these three types of schools.

5. That municipalities having a population of less than 50,000 and having not less than 50 unemployed minors 14 to 16 years of age should be required to maintain general continuation schools.

The suggestion was made that evening trade courses should cover from 5 to 50 lessons for the man who wants a definite course, gets it and then quits, and from two to four years for the man who is willing to spend several years in preparation for the job higher up; that two evenings a week and two hours an evening are sufficient; that registration should be started several weeks before the opening of school; and that a certificate or diploma should be given to those successfully completing the course.

Two addresses emphasized efficiency factors in industrial training, one suggesting technical knowledge, skill, industrial intelligence, and a ready and easy adaptation to environment; the other noting factors of organization which must precede the opening of the proposed school, including physical and economic conditions in the industry and teaching considerations, and factors of operation or conduct of the school, including suitable equipment, competent teachers, the proper adjustment of the pupil's time between the workshop and other departments of the school, and sound business and pedagogical policies with administrative liberty to carry out these policies effectively.

Discussion of the question of training teachers for vocational schools brought out the fact that three distinct groups are now recognized—trade, technical, and academic teachers—who should be trained primarily for the work in which they are to engage. This may be accomplished through a short summer course, a winter's evening course, a course on Saturdays during the school year, all of these being correlated to form a cumulative extension plan supplemented by practice and experience.

The importance of keeping the shop instructor in touch with trade conditions and developments was suggested, this being done by having him and his class visit and work in the commercial shop or having the commercial shop and its workers come to the school.

A feature of the Indianapolis meeting was the conference on vocational home making, at which the problem of the trained servant in the household was presented, followed by a summary of the study of housekeeping in the Indiana survey. In trying to meet this problem the difficulty appears to be that the public does not recognize the trained servant as an industry and a trade to which should be applied the same tests as are applied to other industrial pursuits. The employer must see that this occupation "is not a private, personal, or family affair," but that "it is a social and community affair, and for that reason only the social and community standards must be applied to it." The Indiana survey developed the fact that "housewives are giving intelligent thought to this subject and that the traditional attitude between employer and employee is being transformed to more acceptable relations."

Prevocational education was given considerable attention, with particular reference to those children who leave the elementary schools between 12 and 14 years of age and who do not attend high school; courses of study were outlined. It was noted that these schools aim "to restore confidence to the retarded, the discouraged, the nonconformist, the pupil born short; to give a round of industrial experiences that will aid the pupil in selecting a vocation; to hold pupils in school who have lost interest." The opinion was expressed that the junior high school meets the requirements covered by the prevocational school "except the influence of the older pupils and the flexibility of courses," and that "the continuation school, except for youth over 16 years, is a makeshift that will disappear when our compulsory-education laws are made to apply to all minors under 16 years of age. * * * It attempts to repair the defects of the regular school" and if these were repaired by the regular school itself, "the continuation school for boys over 16 would become a school for industrial specialization, a very valuable addition to our school system."

Taking up the question of the place of the senior high school it was pointed out that it "must be reorganized upon a curriculum basis instead of subject or subject-department basis," offering, in cities of 100,000 or more population, "a curriculum for service in industry for boys, a curriculum for service in business for boys and girls, a curriculum for service in women-employing occupations for girls, a curriculum with wide options for boys and girls with undefined aims."

Brief statements were made of how certain communities are preparing women and girls to meet the vocational opportunities offered them in industry, through all-day trade schools, all-day vocational household arts schools, evening schools and trade extension courses, evening schools and vocational household arts classes, and through the instrumentality of the women of the community, especially teachers and club women.

In conjunction with the tenth annual meeting of the National Society for the Promotion of Industrial Education, a conference of employment managers was held on February 21, the evening meeting being devoted to the subject of new phases of the labor problem in industrial organizations, and the evening meeting to labor turnover as a problem of the employment department. The papers presented at this conference were noted in the April, 1917, issue of the MONTHLY REVIEW (pp. 574-581).

VOCATIONAL EDUCATION SURVEY OF RICHMOND, IND.

The Indiana Legislature in February, 1916, passed a vocational education law devised to stimulate vocational education by granting State aid to all communities which would organize and conduct vocational departments and schools offering instruction in elementary agriculture, domestic science, and industrial arts. To render this instruction effective and to provide for its development, the State survey committee conducted a vocational education survey of a number of communities, including Indianapolis, Evansville, and Jefferson County.¹ In carrying on this work the efforts of the committee were directed principally "to those industries in which it seemed probable that the development of the industry and the advancement of workers in the industry was prevented or made difficult by a lack of knowledge or of training on the part of the worker; and to those industries and occupations in which shop training and experience were necessarily under any conditions inadequate as means of developing complete efficiency."

The Richmond survey was made during 1916 cooperatively by the Indiana University, the board of education and Commercial Club of Richmond, and the State board of education, the aim being, in

¹ The results of these surveys were noted in the MONTHLY REVIEW for March, 1917, pp. 469 to 476.

common with the other surveys, to ascertain from a study of the industries of the community the facts which would be needed to outline an efficient and economic program of vocational training for that community, and to ascertain from a study of the work being done in the schools how far the vocational needs of the community were already being met by existing agencies. Having ascertained the facts, the immediate purpose of the survey, as suggested in the report recently issued,¹ was (1) to suggest a program for vocational education (as defined in the Indiana law) for all-day, part-time, and evening schools for Richmond; (2) to suggest provisions which should be made in the reorganized junior high school for vocational preparatory and vocational education for industry, commerce, agriculture, and household arts; and (3) to devise a program for industrial, fine, and household arts for the elementary schools.

It appears from the report that Richmond is a manufacturing city of approximately 25,000 people, over 70 per cent of whom (in 1910) were native whites of native parents; with a low per cent of illiteracy (1.4 per cent in 1910); and offering employment in shops and factories to over two-thirds of its working population. Its industries "are the most important economic factor in the life of the city." The report states that in 1914 there were 118 manufacturing establishments giving employment to 4,238 workers who received \$2,316,000 in wages.² In the analysis of 23 industries,³ employing 4,815 workers (4,010 males and 805 females), representing 250 distinct trades, 145 of which were studied in detail, several facts that are brought out may be noted:

1. A great majority of workers are native born, only 34 out of 457 being foreign born.

2. There is a tendency for workers to enter the industries listed at a later age and to remain in them for a longer time than in other cities.

3. One-half of the 377 workers reporting attended the Richmond schools and one-half attended schools elsewhere, and more of those who attended schools elsewhere than of those who attended the Richmond schools completed the elementary school as well as the high school.

4. About one-third of 413 workers reporting on age at time of leaving school left under the age of 15, "indicating that the ma-

¹ Indiana. State Board of Education: Educational Bulletin No. 18, Indiana Survey series No. 3, Report of the Richmond, Ind., survey for vocational education. Indianapolis, Dec. 1, 1916. 599 pp. Illustrated.

² These figures do not include the hand trades, the building trades, neighborhood industries, or other types of production not actually carried on under the factory system.

³ These industries are: Automobile; wire fence; lawn mower; agricultural implement; railroad repairing, machine tool manufacturing, and other metal industries; musical instrument, casket, and furniture industries; job and newspaper printing; building construction; underwear, glove, and workmen's wear industries; ladies' tailoring, dress-making and general sewing; dry cleaning, dyeing, and hat cleaning; laundry.

majority of these workers remained in school considerably beyond the present working-permit age. Coupled with schools completed these facts indicate that the Richmond industrial workers have received more education than the great majority so employed in other parts of the country."

5. Most of the workers reporting worked an average of 10 hours per day, with 8 hours on Saturday.

6. Wages seem to be low. Of 278 reporting, 19.5 per cent received under \$10.01 per week, and 88.8 per cent received less than \$20.01 per week.

7. Of workers following a single occupation a relatively long period of time, 33.4 per cent have been in one occupation 11 years or over. However, of 310 workers reporting, 179 or 57.7 per cent had worked in at least one other occupation.

8. Of 124 workers reporting, 112 had taken a course of some kind since leaving school, 70 of these studying in free night schools and 31 in correspondence schools.

As already stated, the report gives a detailed description of the processes involved in the various industries studied, submitting at the end of each chapter brief but general suggestions as to what sort of education would best equip workers for greater proficiency in the particular occupation. Chapters are devoted to commercial employments, including mercantile traffic, mercantile sales with suggestions concerning training for salesmanship, telephone service, and office service, with brief recommendations for adapting the school courses to meet the needs of those engaged in these activities.

For the housewives the survey committee recommends afternoon and evening courses in nursing, care and feeding of children, sewing, cooking, dietetics, and home furnishing. Suggestions for meeting, in the training of nurses, the gap between the completion of the high-school course and entrance to the nurse-training school are made. The servant problem was also given consideration, but no workable agreement resulted.

The committee gave careful attention to juvenile employment, and found that from September 1, 1915, to May 1, 1916, permits to go to work were issued to 79 boys and 67 girls, about 40 per cent of whom left school before entering seventh grade and about 80 per cent of whom were 14 years of age or under. In this connection the committee recommends that the establishment of part-time classes be mandatory upon all boards of education of cities and towns of 5,000 population and over; that attendance of all boys and girls under 18 years of age, who have left school and entered any type of profitable employment, be required for at least five hours each week during the regular school year; that in addition to the provisions for part-time

education complementary to daily employment, part-time education be also provided through continuation schools for all youthful workers who are at work in juvenile employment regardless of whether it is complementary to the daily employment.

Based on its study of the opportunities for vocational education in Richmond and supplementing what has already been accomplished along this line, the survey committee first recommends the development of a junior high school, embracing the three years of school life immediately following the sixth grade, its work being made up of required and elective subjects, the latter having appreciable identity with occupational activities so that the pupils may select a course that will fit them for a chosen line of work. A course of study is outlined. It is further recommended that a senior high school be organized on a strictly life-career basis and that all work be either directly preparatory for other schools and courses or immediately vocational. Here again a course of study is outlined. The committee recommends that provision be made for preparatory courses for prospective graduate and practical nurses; that the present "general sewing courses" be modified to constitute trade preparation for seamstresses and dressmakers; that specific provision be made for study of all the phases of the work of the housewife. The night school now operated in Richmond, it is stated, should be continued and supplemented as needs arise.

The committee recommends that subsequent investigations be made of practical nursing, mercantile traffic, mercantile sales, and the public library, the latter being a potent factor in vocational education for adults.

RETIREMENT OF TEACHERS IN MASSACHUSETTS.

The third annual report of the teachers' retirement board of Massachusetts¹ gives a brief account of the work of the board during the year ending December 31, 1916, showing the condition of the fund on that date and the estimates for the year ending November 30, 1917, together with a report of the board, as charged by the legislature of 1916, on the advisability of making provision in the law for the retirement of teachers permanently disabled. It appears from this report that 4,340 teachers entering the service of the public schools after July 1, 1914, when the system was established, have been enrolled as members of the retirement association and that 6,426 teachers who entered the service prior to that date have voluntarily joined. Taking account of 711 withdrawals among younger teachers,

¹ Massachusetts, Third annual report of the teachers' retirement board for the year ending Dec. 31, 1916. Public Document 109. Boston, 1917. 20 pp.

306 among older teachers, and 82 deaths, the total membership on December 31, 1916, was 9,667.

The members of the retirement association are required to contribute monthly assessments to the annuity fund, and an account is kept for each member showing the amount contributed and the interest allowed thereon. During the year the income from members' deposits amounted to \$375,919.85, almost \$40,000 in excess of the deposits received in 1915, and refunds to members withdrawing amounted to \$32,066.91, almost \$30,000¹ more than the refunds in the preceding year. The income was \$358,570.83 in excess of the disbursements and the total assets on December 31, 1916, were \$824,105.89.

The report states that during the year the board acted favorably on 242 applications for retirement allowances but that owing to deaths the number on the retirement list was reduced to 226, and calls attention to the fact that while 94 members attained the age of 60 and were therefore eligible to retire, only 7 made application for retirement allowances. A total of \$76,151.35 was paid to retiring members, and the board estimates that for the year ending November 30, 1917, \$96,000 will be needed for pensions.

In its investigation of the subject of disability allowances for public-school teachers and the need for legislation to this end, the board found (1) that the fundamental purpose of the teachers' retirement law, namely, to increase the efficiency of the schools, would be more completely realized by the incorporation in the law of a disability provision; (2) that the Massachusetts teachers' retirement law is practically alone among the large number of similar laws in this country in containing no provisions for disability; (3) that there is even more reason for having such a provision in the Massachusetts law than in other States, for the reason that under the provisions of the Massachusetts law most of the teachers are required to serve for a longer period before becoming eligible to receive a retiring allowance than is required under the provisions of the laws of other States; and (4) that the school authorities and school officials of the State are apparently unanimous in their belief that such legislation should be placed upon the statute books.

Accordingly the board has submitted a bill which provides that, subject to the approval of the retirement board, an employing school committee may retire a teacher who has served in the public schools of the State for 15 years or more, if on account of disability the teacher is incapable of rendering satisfactory service; that the disabled teacher shall receive an annuity to be derived from his or her

¹This large increase in the amount refunded is due to the fact that, by a change in the law, a member withdrawing from the service before paying six annual assessments to the annuity fund may receive the refund in one sum instead of in four installments as originally provided.

contribution, the State to grant a pension dependent upon the number of years of service and the salary received by the teacher, etc. To take care of cases where a teacher recovers from the disability the board may request the reexamination of the teacher by a physician selected by the board, and, if the disability is found no longer to exist, shall cause the retirement allowance to cease.

EMPLOYMENT IN SELECTED INDUSTRIES IN MAY, 1917.

The bureau received reports from representative manufacturing establishments in 13 industries concerning volume of employment in the month of May, 1917. As set forth in the table below there was an increase in the number of people on the pay roll in 10 of the 13 industries in the month of May, 1917, as compared with May, 1916. The iron and steel industry shows an increase of 19.2 per cent which was the largest. There was an increase of 15.2 per cent in automobile manufacturing. Cotton manufacturing, the silk industry, and car building and repairing show a decrease in the number of people employed. One cotton manufacturing establishment reported that 127 more men could be used, and that paper mills, machine shops, and public service corporations were continually drawing its help away.

Every industry covered by the inquiry showed an increase in the amount of money paid to persons on the pay roll in May, 1917, as compared with the same month in 1916. The iron and steel industry reports the marked increase of 48.2 per cent. The figures also show that there was an increase of 31.6 per cent in automobile manufacturing.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN MAY, 1916, AND MAY, 1917.

Industry.	Estab-lish-ments to which in-quiries were sent.	Estab-lish-ments report- ing for May both years.	Period of pay roll.	Number on pay roll in May—		Per cent of increase (+) or decrease (-).	Amount of pay roll in May—		Per cent of in-crease (+) or de-crease (-).
				1916	1917		1916	1917	
Boots and shoes.....	85	70	1 week..	57,260	59,365	+ 3.7	\$746,640	\$854,221	+14.4
Cotton manufacturing....	89	50	...do....	41,977	41,365	- 1.5	391,192	443,690	+13.4
Cotton finishing.....	19	14	...do....	10,638	11,136	+ 4.7	136,980	165,621	+20.9
Hosiery and underwear...	82	51	...do....	26,847	27,424	+ 2.1	262,269	301,031	+14.8
Woolen.....	56	44	...do....	37,312	37,967	+ 1.8	455,746	560,598	+23.0
Silk.....	64	44	2 weeks.	17,578	17,154	- 2.4	396,411	434,363	+ 9.6
Men's ready-made clothing	86	34	1 week..	12,621	14,035	+11.2	158,935	204,289	+28.5
Iron and steel.....	142	101	½ month.	157,946	188,201	+19.2	6,029,515	8,937,603	+48.2
Car building and repairing.	78	40	...do....	50,930	48,833	- 4.1	1,663,939	1,802,801	+ 8.3
Cigar manufacturing.....	104	66	1 week..	19,277	19,666	+ 2.0	206,166	243,076	+17.9
Automobile manufactur- ing.	67	39	...do....	104,166	120,046	+15.2	2,106,767	2,773,105	+31.6
Leather manufacturing...	44	31	...do....	15,384	15,832	+ 2.9	201,573	244,373	+21.2
Paper manufacturing.....	82	48	...do....	19,137	20,425	+ 6.7	254,930	320,793	+25.8

Reports from some establishments indicated, in response to the inquiry, the number of people actually working on the last full day of the reported pay period in May, 1916, and May, 1917. However, the number furnishing these figures was small in most of the industries and in using the figures in the following table one should bear this in mind. The figures for 1917 in the iron and steel industry would be slightly larger but for the fact that a strike occurred in one establishment during the reported pay period and only a few people were working on the last full day.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN MAY, 1916, AND MAY, 1917.

Industry.	Establishments reporting for May both years.	Period of pay roll.	Number actually working on last full day of reported pay period in May—		Per cent of increase (+) or decrease (-).
			1916	1917	
Boots and shoes.....	22	1 week....	11,934	12,723	+ 6.6
Cotton manufacturing.....	31	..do.....	25,157	24,670	- 1.9
Cotton finishing.....	11	..do.....	9,062	9,411	+ 3.9
Hosiery and underwear.....	15	..do.....	9,599	9,777	+ 1.9
Woolen.....	37	..do.....	27,888	27,937	+ 0.2
Silk.....	22	2 weeks....	7,232	6,732	- 6.9
Men's ready-made clothing.....	4	1 week....	565	583	+ 3.2
Iron and steel.....	90	$\frac{1}{2}$ month....	127,452	152,373	+19.6
Car building and repairing.....	37	..do.....	45,284	42,031	- 7.2
Cigar manufacturing.....	25	1 week....	5,022	5,052	+ .6
Automobile manufacturing.....	19	..do.....	50,959	60,764	+19.2
Leather manufacturing.....	14	..do.....	8,567	8,987	+ 4.9
Paper making.....	16	..do.....	5,898	6,790	+15.1

In May of this year as compared with April there was a decrease in the number of people on the pay roll in 8 of the 13 industries rendering reports. The greatest decrease indicated was 4.3 per cent in leather manufacturing.

Contrary to what one would expect after reading the preceding paragraph, all the industries except one—leather manufacturing—show an increase in the amount of money paid to employees in May as compared with April. This is explained by increases in wage rates in many establishments between April 15 and May 15, 1917, as the reader will see by referring to page 156, and probably also by overtime, or speeding up of pieceworkers. An increase of 18.7 per cent in the iron and steel industry was the greatest.

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COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN APRIL, 1917, AND MAY, 1917.

Industry.	Establishments to which inquiries were sent.	Establishments reporting for April and May.	Period of pay roll.	Number on pay roll in—		Per cent of increase (+) or decrease (-).	Amount of pay roll in—		Per cent of increase (+) or decrease (-).
				April, 1917.	May, 1917.		April, 1917.	May, 1917.	
Boots and shoes.....	85	70	1 week...	59,925	59,407	-0.9	\$814,419	\$854,250	+ 4.9
Cotton manufacturing...	89	52	...do.....	44,643	44,340	- .7	463,701	482,741	+ 4.1
Cotton finishing.....	19	15	...do.....	13,366	13,611	+1.8	184,171	201,189	+ 9.2
Hosiery and underwear.	82	53	...do.....	28,333	28,772	+1.5	293,347	315,813	+ 7.7
Woolen.....	56	46	...do.....	41,454	41,690	+ .6	544,435	614,479	+12.9
Silk.....	64	47	2 weeks..	20,489	20,191	-1.5	499,396	510,089	+ 2.1
Men's ready-made clothing.	86	35	1 week..	13,793	14,242	+3.3	187,531	206,343	+10.0
Iron and steel.....	142	103	½ month.	183,896	189,222	+2.9	7,493,149	8,896,603	+18.7
Car building and repairing.	78	40	...do.....	49,410	49,220	+ .4	1,626,894	1,814,389	+11.1
Cigar manufacturing....	104	61	1 week..	19,037	18,980	- .3	220,098	233,770	+ 6.2
Automobile manufacturing.	67	39	...do.....	124,808	122,081	-2.2	2,765,142	2,812,822	+ 1.7
Leather manufacturing.	44	31	...do.....	16,536	15,832	-4.2	245,716	244,373	- .5
Paper making.....	82	43	...do.....	19,393	18,890	-2.6	287,755	300,336	+ 4.4

In the next table will be found comparable data relative to the number of persons actually working on the last full day of the reported pay period in April, 1917, and May, 1917. Quite a number of the establishments did not give these figures and the reader should note this when using the figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON LAST FULL DAY'S OPERATION IN APRIL, 1917, AND MAY, 1917.

Industry.	Establishments reporting for April and May.	Period of pay roll.	Number actually working on last full day of reported pay period in—		Per cent of increase (+) or decrease (-).
			April, 1917.	May, 1917.	
Boots and shoes.....	27	1 week...	15,236	15,153	- 0.5
Cotton manufacturing.....	36	...do.....	28,307	28,445	+ .5
Cotton finishing.....	10	...do.....	6,597	6,691	+ 1.4
Hosiery and underwear.....	16	...do.....	9,230	9,282	+ .6
Woolen.....	38	...do.....	34,167	34,121	- .1
Silk.....	32	2 weeks..	15,525	15,336	- 1.2
Men's ready-made clothing.	4	1 week..	569	583	+ 2.5
Iron and steel.....	95	½ month..	150,122	155,678	+ 3.7
Car building and repairing.	37	...do.....	42,248	42,601	+ .8
Cigar manufacturing.....	20	1 week..	5,438	4,848	-10.8
Automobile manufacturing.	19	...do.....	69,806	65,849	- 5.7
Leather manufacturing.....	14	...do.....	9,368	8,987	- 4.1
Paper making.....	11	...do.....	3,638	3,689	+ 1.4

CHANGES IN WAGE RATES.

The reports indicate that many wage rate changes occurred in 12 of the 13 industries during the period April 15 to May 15, 1917. No establishments in the men's ready-made clothing industry reported having made any changes. A comparatively large number of the establishments failed to answer the inquiry as to whether or not any

change in wage rates occurred during the period, but in such cases it is probably safe to assume that none was made. Taking the 13 industries as a whole there were more increases reported during this period than in several months immediately preceding.

Out of a total of 103 establishments in the iron and steel industry rendering volume of employment data for the months of April and May, 36 reported that wages had been increased during the period. Twenty of these establishments granted a 10 per cent increase either to all or to "practically all" employees. Two gave an increase of nearly 10 per cent to about all employees. One plant stated that what had been a 20 per cent bonus had been increased to a 30 per cent bonus, and another reported that all day, piece, and bonus workers were increased 10 per cent in wages. Laborers were given a 10 per cent increase in one establishment, while in another a 4 per cent increase was granted in the finishing and muck mill, and a 10 per cent increase to the remainder of the force. One-third of the force received a 15 per cent increase in one establishment, while in another one-third of the force was granted an 8.8 per cent increase, and the remaining two-thirds a 5 per cent increase. One establishment reported a 25 per cent increase to part of the force and 10 per cent to the other part, and another gave a 5 per cent increase to part of the workers, but in neither case was the proportion of the force affected given. In one instance an increase ranging from 5 to 10 per cent was granted. All employees in one plant received a 7.4 per cent increase and nearly all in another were granted an increase of 8.1 per cent. In another plant 40 per cent of the force received an increase of 16 per cent. Two others reported increases, one giving 8.8 per cent to 7 per cent of the force and the other 8.5 per cent to the entire plant.

Out of 9 establishments in cotton manufacturing indicating wage increases, 5 stated that the increase was 10 per cent, affecting all employees. Another granted a 10 per cent increase to day help, and still another gave an increase of 10 per cent to continue during the war or until the high cost of living decreases. All employees in one establishment were given an increase of 8 per cent. One establishment gave one bonus of one week's pay.

In cotton finishing several increases were reported. One establishment granted an increase to 95 per cent of the total force, the increase being 10 per cent to workmen earning 25 cents an hour or less and 5 per cent to those earning over 25 cents an hour. Similar increases were given in two other establishments, affecting 90 and 100 per cent of the force, respectively. One establishment increased the wages of employees earning \$12 a week and under 10 per cent, and of those earning over \$12 per week 5 per cent, the total proportion of the force

affected being 82 per cent. Three establishments reported having made an increase of 10 per cent, the increase applying to all departments in one instance, all except the office force in the second, and 90 per cent of the force in the third. A 10 per cent increase to 90 per cent of the force and a 5 per cent increase to 7.5 per cent of the force was given by one establishment. Another granted a 5 per cent bonus to mill workers and foremen.

In the hosiery and underwear industry six establishments reported having made a 10 per cent general increase. In one case a 2 per cent increase was given to all employees, while in another a 7 per cent increase was granted to 95 per cent of the force. An advance in wages of 30 per cent to one-fourth of the force was indicated by another establishment. Twelve per cent of the employees in one instance received an increase of 10 per cent, while in another self-topping knitters were increased 25 per cent in wages, pressers 30 per cent, and other increases were made. One other establishment stated that no general increase had been made recently, but wages were on the average 10 to 15 per cent higher than last year.

In paper manufacturing three establishments gave an increase of 10 per cent to all employees. One establishment granted an increase of 5 per cent to all persons on the pay roll, while another gave a 20 per cent increase to all. Two cents per hour to each person was the increase given in six establishments in this industry. Another gave an increase of $1\frac{3}{4}$ cents per hour to each person. In one case an additional 15 cents per day was granted to each person, while another gave an additional 25 cents per day to each employee. An increase of 3 per cent was given in one instance with an additional 5 per cent to employees making full time. One establishment gave a 10 per cent bonus to all the force. In another instance all-day and tour workers received an increase of 25 cents per day.

In leather manufacturing six establishments reported increases. One granted a 10 per cent increase to 80 per cent of the employees, and another gave an increase of 10 per cent to all employees. A third gave a 5 per cent increase to all. Forty-five per cent of the force received an increase of from 8 to 10 per cent in one case, and in the remaining two establishments one gave an increase of 20 cents per day to each person employed, while the other increased each person 25 cents per day.

The silk industry reported several increases in wage rates. A 13 per cent increase affecting the whole force was given in one establishment, a 10 per cent increase in some departments in another instance, and an increase of 10 per cent to 60 per cent of the force in a third. One establishment gave a 5 per cent increase which applied to 75 per cent of the force, and another granted an increase of 8.5 per cent, affecting 30 per cent of the force.

In woolen manufacturing 31 establishments gave an average increase of 8 per cent to all employees, 3 gave all employees a 10 per cent increase in wages, and 2 gave a 5 per cent increase to all. In one instance a 5 per cent increase was given to all except overseers and the office force. Two other establishments reported increases, one a 7.5 per cent increase to all employees and the other giving an increase to 33 $\frac{1}{3}$ per cent of the force but not reporting the amount.

In automobile manufacturing one establishment reported a 10 per cent increase to the entire force. Two others reported a 10 per cent increase, which affected 7 per cent of the force in one of them and all factory employees in the other. In another instance the productive average hourly rate was increased \$0.0165. Still another establishment stated that a 5 per cent increase was granted some employees.

Four establishments reported increases in boot and shoe manufacturing as follows: A 10 per cent increase, affecting 88 per cent of the force in one instance; an increase of 5 per cent to the entire force in the second; a 10 per cent increase in wages, with a reduction of hours from 54 to 50 per week in the third; and an increase of nearly 2 per cent in weekly earnings in the fourth.

In car building and repairing one establishment granted an increase of 1 $\frac{1}{2}$ cents per hour to laboring and nonorganized classes, which together constitute about 35 per cent of the whole force. Three establishments reported an increase of 20 per cent, affecting the whole force in each instance. A 21 per cent increase to all employees was given by one establishment. Another gave an increase of 3 cents per hour, affecting 75 per cent of the force.

Two establishments in cigar manufacturing reported increases, one giving an additional dollar per thousand on 10-cent cigars and 50 cents per thousand on 5-cent cigars, and the second granting an increase of 45 per cent to 16 per cent of the force.

EMPLOYMENT IN THE STATE OF NEW YORK IN MAY, 1917.

The bureau of statistics and information of the New York State department of labor has issued the following summary of the labor market in that State:

MANUFACTURING ACTIVITY IN MAY.

[Reported by 1,600 representative firms with over 600,000 employees, or more than one-third of the factory workers in the State, and a weekly pay roll of over \$9,000,000.]

Manufacturing activity in New York State in May, 1917, showed a gain as compared with the previous month. The amount of wages paid out was greater than in any other month since these returns have been received, with the exception of March, 1917, in which month the pay rolls were larger by a negligible amount. Contributing factors to this result were increased scale of operations, overtime employment, and increases in wage rates. Returns as to number of employees and amount of wages paid have been received from a large number

of leading concerns, representing all of the important manufacturing industries and localities in the State and covering the period since June, 1914. As compared with April, there was an increase of $3\frac{1}{2}$ per cent in wages. The number of employees, however, was smaller by less than 1 per cent. Nine of the eleven industrial groups reported an increased amount of wages. Five only of these nine reported an increase in number of employees, the remaining four reporting a loss. Two of the groups—printing and clothing—reported losses in employees and in wages. Each of the industrial groups displayed greater activity in May, 1917, than in the same month of last year, the increase in number of employees for all industries combined being 6 per cent and in amount of wages 21 per cent. Corresponding increases over May, 1915, were 24 and 57 per cent, respectively.

The average per capita earnings for one week in May, 1917, of all employees, including both sexes, were \$16.15 as against \$15.50 in April. The average per capita earnings for one week in May, 1916, were \$14.24, and in May, 1915, they were \$12.74.

The *stone, clay, and glass products* group reported in May an increase of 3 per cent in number of employees and 6 per cent in amount of wages paid as compared with April. This was a high record for this group in both respects. The miscellaneous stone and mineral industry, which reported a loss in April, reported a loss in May also. The brick industry, which is now in the full swing of the season, made the largest gains over last month. As compared with May, 1916, the group as a whole employed 9 per cent more workers and paid out 30 per cent more wages.

The *metals, machinery, and conveyances* group which outweighs any other in these returns both in number of employees and in the aggregate of wages paid, reported in May a negligible increase in workers and 6 per cent increase in wages as compared with April. This was the largest amount of wages yet reported in this group dating back to and including June, 1914. The manufacture of brass and copper goods was the only industry in the group to report a decrease in wages. Specially marked gains were made in the manufacture of pig-iron and rolling-mill plants, and of cooking, heating, and ventilating apparatus. The manufacture of automobiles, carriages and parts, and railway rolling stock each made a substantial gain. The machinery industry, the weightiest in the group, reported 4 per cent increase in wages as compared with April. The group as a whole had 9 per cent more employees and paid out 26 per cent more wages than in May of last year.

The *wood manufactures* group reported in May a decline of nearly 1 per cent in employees and an increase of the same amount in wages as compared with April. Saw and planing mills were more active than in April, having more employees and paying out more wages. The manufacture of musical instruments was less active. The group as a whole employed 6 per cent more workers and paid out 19 per cent more wages than in May of last year.

The *furs, leather, and rubber goods* group in May increased the number of employees by more than 1 per cent and the wages paid by 5 per cent as compared with the previous month. The manufacture of boots and shoes, the dominant industry in the group, reported a seasonal increase. The same was true of fur goods. The manufacture of leather and leather goods reported a slight decrease in activity. As compared with May of last year, the group had 5 per cent more workers and paid out 21 per cent more wages.

The *chemicals* group reported in May a gain of less than 1 per cent in number of employees and of 5 per cent in amount of wages, as compared with April. This established a new record for this group in both respects. The manufacture of paints, dyes, and colors was the only one of the four industries reporting a decline. Pay rolls were 4 per cent larger than last month in the manu-

facture of drugs and chemicals and 8 per cent larger in the animal and mineral oil industry. Increases in wage rates were numerous in the latter industry. As compared with May of last year, the group had 7 per cent more employees and paid out 23 per cent more wages.

The *paper* industry had in May 1 per cent fewer workers but paid out 5 per cent more wages than in April. This established a new record in wages for this industry. There were general increases in wage rates and mills operated to capacity. The number of employees was 9 per cent and the wage aggregate 24 per cent greater than in May of last year.

The *printing and paper goods* group reported in May a decrease of 1 per cent in employees and also in wages. The loss was due to lessened activity in the printing industry, which is dominant in the group. The manufacture of paper boxes and tubes reported gain over April. As compared with May, 1916, the group employed nearly 2 per cent more workers and paid out 7 per cent more wages.

The *textiles* group reported in May a decrease of 1 per cent in employees and an increase of 5 per cent in aggregate of wages, as compared with April. Each of the five industries shared in the pay-roll increase. Hosiery and knit goods had the largest gain and also had a slight increase in number of workers. There were several increases in wage rates in the manufacture of cotton goods. The group employed 6 per cent more workers and paid out 21 per cent more wages than in May of last year.

The *clothing, millinery, and laundering* group reported a seasonal loss in May, as compared with April of nearly 5 per cent in employees and nearly 7 per cent in amount of wages. The loss was chiefly in the two industries of women's clothing and of millinery. In men's clothing there was a gain and also in miscellaneous sewing. The group as a whole had nearly 4 per cent more employees and paid out 13 per cent more wages than in May, 1916.

The *food, liquors, and tobacco* group reported in May a gain over April of 3 per cent in amount of wages, thereby establishing a new record. The number of employees was practically the same. Miscellaneous groceries reported a gain of 4 per cent in employees and 6 per cent in wages. Bakeries reported a loss of 5 per cent in employees and more than 3 per cent in wages. Cigar, cigarette, and tobacco factories reported a 4 per cent increase in pay rolls. Confectionery and ice cream plants reported a gain. As compared with May of last year, the group as a whole had 6 per cent more workers and paid out 18 per cent more wages.

The *water, light, and power* industry had in May 1 per cent fewer employees but paid out 4 per cent more wages than in April, a new record in the latter respect. As compared with May of last year, there were 5 per cent more workers and an increase of 12 per cent in the aggregate of wages.

BUILDING ACTIVITY IN PRINCIPAL CITIES.

[As reported by building departments.]

A marked decline in building operations is indicated by the reports for May, 1917, from the building departments of the 10 first and second class cities of the State. The estimated cost of building work (of which new construction constituted 74 per cent) was 21 per cent less than in April, 1917, and 67 per cent less than in May, 1916. As compared with the previous month, only three cities—Rochester, Troy, and Yonkers—reported increases. Every borough in New York City reported a decline, except Brooklyn, where there was a slight gain. As compared with May of last year, Syracuse alone reported a gain, all boroughs in New York City showing a loss.

**LABOR ORGANIZATIONS AND UNEMPLOYMENT IN
MASSACHUSETTS.**

As Part VI of the Annual Report on Statistics of Labor for 1916 the Massachusetts Bureau of Statistics has issued labor bulletin No. 118, being the eighth annual report on labor organizations for the year 1915. This pamphlet¹ gives a general review of the labor movement in Massachusetts in 1915, citing the fact that the State board of conciliation and arbitration investigated 209 disputes, all of which the board was instrumental in settling; and presents data on number and membership of the labor organizations and statistics on unemployment in the organized industries.

It appears from this report that at the close of 1915 there were 1,425 labor organizations in the State, an increase of 33 over the preceding year, and that the trade-union membership was 243,535, or an increase of 4 per cent over 1914. Classified by industries the membership in these organizations was: Boot and shoe, 42,714; building trades, 38,591; transportation, 35,932; textiles, 17,287; iron and steel, 16,742; printing and allied trades, 6,550; all others, 85,719.

The data on unemployment, based on reports received from labor organizations, represent a membership of 168,122, or about 70 per cent of the total number of organized wage earners in the Commonwealth. From them it appears that for all causes the percentage of unemployment averaged for the year 1915 was 10.7, as compared with 13 per cent in 1914 and 8.7 per cent in 1913; while the percentage of unemployment on account of lack of work or material was 7 in 1915, 9.9 in 1914, and 5.8 in 1913. Considered by industries, the largest amount of unemployment in 1915 was in the building trades (16.4 per cent), with iron and steel second (13.1 per cent).

The following table shows for specified industries the number and per cent of trade-unions and the membership therein at the close of 1915, and the average percentage of unemployment in each industry during 1915.

¹ Massachusetts. Bureau of Statistics. Eighth annual report on labor organizations for the year 1915. Labor Bulletin No. 118, Boston, 1917. 59 pp.

NUMBER AND PER CENT OF TRADE-UNIONS AND MEMBERSHIP THEREIN AT THE CLOSE OF 1915, AND AVERAGE PER CENT OF UNEMPLOYMENT DURING 1913, 1914, AND 1915, IN EACH SPECIFIED INDUSTRY.

Industry.	Trade-unions.		Membership.		Average per cent of un-employment from all causes.		
	Num-ber.	Per cent.	Number.	Per cent.	1913	1914	1915
Building trades.....	363	25.5	38,591	15.8	13.6	22.4	16.4
Transportation.....	170	11.9	35,932	14.8	3.2	4.6	5.9
Boot and shoe.....	106	7.4	42,714	17.5	7.7	13.8	10.3
Iron and steel.....	101	7.1	16,742	6.9	10.7	14.2	13.1
Textiles.....	66	4.6	17,287	7.1	11.6	11.1	6.2
Printing and allied trades.....	56	3.9	6,550	2.7	4.2	8.7	8.0
All others.....	563	39.5	85,719	35.2	(1)	(1)	(1)
Total.....	1,425	100.0	243,535	100.0	28.5	21.5	20.0

¹ Not reported.

² Average for the 6 specified industries, and does not agree with the averages noted on p. 162, which include all industries.

The report notes quite a general reduction in hours of labor with some increases and a few decreases in wages.

WORK OF FEDERAL, STATE, AND MUNICIPAL EMPLOYMENT OFFICES IN THE UNITED STATES AND OF PROVINCIAL EMPLOYMENT BUREAUS IN CANADA.

Figures are given in the following table showing the operations of public employment offices for the month of May, 1917. In previous issues of the MONTHLY REVIEW the reports of the Federal employment offices have been presented in a separate table, but in this issue they are combined in the same table with the State and municipal employment offices. Data presented for the United States are for Federal employment bureaus in 22 States and the District of Columbia, a Federal-State employment bureau in one State, a Federal-State-county-city employment bureau in one State, a Federal-State-city employment bureau in one State, a Federal-city employment bureau in one State, State employment bureaus in 17 States, State-city employment bureaus in 2 States, municipal employment bureaus in 8 States, and a city-private employment bureau in one State. Figures for 2 Canadian employment offices are also given.

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OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, MAY, 1917.

State and city.	Applica- tions from em- ployers.	Persons asked for by em- ployers.	Persons applying for work.		Persons referred to positions.	Posi- tions filled.
			New registra- tions.	Re- newals.		
California:						
Berkeley, municipal.....	246	271	78	329	255	255
Fresno, municipal.....	285	514	453	234	531	508
Los Angeles—						
Federal.....	2	12	1 438	(²)	12	12
State-municipal.....	3,134	4,896	2,678	(²)	4,744	3,977
Oakland, State.....	1,139	1,785	644	(²)	1,558	1,311
Sacramento—						
State.....	499	1,952	747	(²)	1,173	1,126
Municipal.....	156	(¹)	46	(²)	(²)	257
San Diego, Federal.....	511	1,184	1 972	(²)	1,094	888
San Francisco, State.....	2,385	5,100	2,808	(²)	4,913	3,509
Total.....					³ 14,280	11,843
Colorado:						
Colorado Springs, State.....	644	644	570	(²)	(²)	535
Denver—						
Federal.....	(²)	(²)	1 31	(²)	50	21
No. 1, State.....	808	808	793	(²)	(²)	610
No. 2, State.....	774	774	646	(²)	(²)	541
Pueblo, State.....	517	517	533	(²)	(²)	518
Total.....					(²)	2,225
Connecticut:						
Bridgeport, State.....	(²)	813	1 1,008	(²)	(²)	734
Hartford, State.....	(²)	1,416	1 1,762	(²)	(²)	1,201
New Haven, State.....	(²)	1,102	1 1,440	(²)	(²)	947
Norwich, State.....	(²)	338	1 398	(²)	(²)	300
Waterbury, State.....	(²)	189	1 250	(²)	(²)	144
Total.....					(²)	3,326
Delaware:						
Wilmington, Federal.....	28	55	1 290	(²)	210	205
District of Columbia:						
Washington, Federal.....	90	408	1 444	(²)	216	184
Idaho:						
Boise, municipal.....	117	200	118	27	145	140
Moscow, Federal.....	17	17	1 15	(²)	15	15
Total.....					160	155
Illinois:						
Chicago—						
Federal.....	650	3,438	1 3,119	(²)	2,612	2,485
State.....	6,026	15,675	16,197	1,347	16,580	13,266
East St. Louis, State.....	514	1,200	590	272	832	786
Peoria, State.....	966	1,416	211	940	1,124	1,123
Rock Island-Moline, State.....	581	1,199	501	326	739	676
Rockford, State.....	834	1,259	688	333	912	859
Springfield, State.....	494	581	171	396	529	507
Total.....					23,328	19,702
Indiana:						
Evansville, State.....	132	414	489	72	448	410
Fort Wayne, State.....	361	585	124	499	623	565
Indianapolis—						
Federal.....	195	827	1 1,024	(²)	784	707
State.....	1,581	1,513	1,537	24	1,517	1,517
South Bend, State.....	157	562	556	20	540	514
Terre Haute, State.....	153	315	219	43	262	246
Total.....					4,174	3,959
Iowa:						
Des Moines, State.....	110	301	362	16	289	180
Kansas:						
Topeka, State.....	185	211	230	10	220	198

¹Number applying for work. ²Not reported. ³Exclusive of Sacramento municipal office, not reported.

MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS. 165

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, MAY, 1917—Continued.

State and city.	Applica- tions from employ- ers.	Persons asked for by employ- ers.	Persons applying for work.		Persons referred to positions.	Posi- tions filled.
			New registra- tions.	Re- newals.		
Kentucky:						
Louisville—						
State.....	188	188	239	(2)	188	188
Municipal-private.....	(2)	479	353	443	440	160
Total.....					628	348
Louisiana:						
New Orleans, Federal-State-municipal.....	55	220	1 318	(2)	315	106
Maryland:						
Baltimore, Federal.....	48	368	1 403	(2)	241	241
Massachusetts:						
Boston—						
Federal.....	27	480	1 525	(2)	115	73
State.....	2,474	2,872	1,609	(2)	4,167	1,824
Springfield, State.....	1,140	1,473	474	(2)	1,657	1,084
Worcester, State.....	1,171	1,461	645	(2)	1,529	876
Total.....					7,468	3,857
Michigan:						
Battle Creek, State.....	97	190	1 161	(2)	156	156
Bay City, State.....	68	372	1 96	(2)	87	87
Detroit—						
Federal.....	60	382	1 366	(2)	366	366
State.....	2,061	6,321	1 6,184	(2)	6,184	6,184
Flint, State.....	812	812	(2)	(2)	812	812
Grand Rapids, State.....	675	1,032	1 1,004	(2)	990	990
Jackson, State.....	502	1,042	1 1,063	(2)	1,031	1,019
Kalamazoo, State.....	412	415	1 425	(2)	412	412
Lansing, State.....	70	292	1 128	(2)	128	128
Muskegon, State.....	86	223	1 164	(2)	160	139
Saginaw, State.....	129	724	1 618	(2)	618	618
Sault Ste. Marie, Federal.....	8	60	1 79	(2)	67	67
Total.....					11,011	10,978
Minnesota:						
Duluth, State.....	(2)	(2)	(2)	(2)	(2)	2,161
Minneapolis—						
Federal.....	10	10	1 89	(2)	9	8
State.....	(2)	(2)	(2)	(2)	(2)	2,429
St. Paul, State.....	(2)	(2)	(2)	(2)	(2)	1,708
Total.....					(2)	6,306
Mississippi:						
Gulfport, Federal.....	0	0	1 74	(2)	0	0
Missouri:						
Kansas City, Federal-State.....	1,117	2,691	1,228	1,259	2,487	2,296
St. Joseph, State.....	678	6,347	1 1,040	(2)	1,040	1,037
St. Louis, Federal-State.....	312	893	1 605	(2)	463	457
Total.....					3,990	3,790
Montana:						
Butte, municipal.....	652	642	(2)	(2)	(2)	531
Helena, Federal.....	2	2	1 2	(2)	0	0
Total.....					(2)	531
Nebraska:						
Omaha, Federal-State-county-municipal.....	927	1,539	974	547	1,422	1,158
Nevada:						
Reno, Federal.....	76	418	1 480	(2)	337	337
New York:						
Albany, State.....	782	1,374	948	350	1,366	904
Buffalo—						
Federal.....	1,617	2,437	2,105	(2)	2,674	2,134
State.....	1,646	2,475	2,027	194	2,963	2,170

1 Number applying for work.

2 Not reported.

166 MONTHLY REVIEW OF THE BUREAU OF LABOR STATISTICS.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, MAY, 1917—Continued.

State and city.	Applica- tions from em- ployers.	Persons asked for by em- ployers.	Persons applying for work.		Persons referred to positions.	Posi- tions filled.
			New registra- tions.	Re- newals.		
New York—Concluded.						
Greater New York—						
Federal.....	5,401	6,517	¹ 12,036	(²)	6,374	4,357
State.....	2,093	2,852	1,625	859	2,869	1,731
Municipal.....	1,951	3,149	3,391	2,378	4,484	2,236
Rochester, State.....	1,786	2,526	1,234	759	2,370	1,343
Syracuse, State.....	1,554	2,209	1,281	268	1,938	1,448
Total.....					25,038	16,323
Ohio:						
Akron, State-municipal.....	(²)	2,651	991	1,950	2,402	1,993
Cincinnati, State-municipal.....	(²)	2,813	1,827	3,199	2,597	1,867
Cleveland—						
Federal.....	26	53	¹ 162	(²)	87	21
State-municipal.....	(²)	9,029	3,134	9,795	8,048	6,547
Columbus, State-municipal.....	(²)	3,307	1,873	2,912	2,943	2,447
Dayton, State-municipal.....	(²)	1,558	940	1,744	1,358	1,133
Toledo, State-municipal.....	(²)	3,602	1,307	3,340	3,238	2,656
Youngstown, State-municipal.....	(²)	1,773	940	1,323	1,680	1,550
Total.....					22,353	18,214
Oklahoma:						
Enid, State.....	(²)	170	175	(²)	135	135
Muskogee, State.....	(²)	274	285	(²)	262	261
Oklahoma City, State.....	(²)	599	555	(²)	550	492
Tulsa, State.....	(²)	1,481	1,271	(²)	1,271	1,271
Total.....					2,218	2,159
Oregon:						
Astoria, Federal.....	10	48	¹ 118	(²)	13	13
Portland—						
Federal.....	1,517	3,412	¹ 2,897	(²)	2,876	2,749
Municipal.....		3,189	334	(²)	(²)	2,586
Total.....					(²)	5,348
Pennsylvania:						
Altoona, State.....	(²)	196	141	14	118	103
Harrisburg, State.....	(²)	2,241	293	145	414	381
Johnstown, State.....	(²)	183	89	7	89	72
Philadelphia—						
Federal.....	314	2,272	¹ 1,382	(²)	779	587
State.....	(²)	1,476	1,402	695	1,346	1,134
Pittsburgh—						
Federal.....	46	877	¹ 630	(²)	290	257
State.....	(²)	1,440	709	200	757	695
Total.....					3,793	3,229
Rhode Island:						
Providence, State.....	226	270	147	168	(²)	270
Tennessee:						
Memphis, Federal.....	5	25	¹ 107	(²)	89	61
Texas:						
Dallas, municipal.....	274	378	228	11	430	342
Fort Worth, municipal.....	177	615	¹ 1,113	26	412	409
Galveston, Federal.....	5	8	119	(²)	14	10
Houston, Federal.....	0	0	194	(²)	0	0
Total.....					856	761
Virginia:						
Norfolk, Federal.....	16	255	¹ 109	(²)	65	53
Richmond, municipal.....	294	434	573	(²)	582	258
Total.....					647	311

¹ Number applying for work.

² Not reported.

OPERATIONS OF PUBLIC EMPLOYMENT OFFICES, MAY, 1917—Concluded.

State.	Applica- tions from em- ployers.	Persons asked for by em- ployers.	Persons applying for work.		Persons referred to positions.	Posi- tions filled.
			New registra- tions.	Re- newals.		
Washington:						
Aberdeen, Federal.....	9	41	1 64	(²)	41	41
Bellingham, Federal.....	151	304	1 298	(²)	265	231
Everett—						
Federal.....	2	2	1 18	(²)	2	1
Municipal.....	(²)	(²)	(²)	(²)	(²)	444
Kennewick, Federal.....	30	180	1 144	(²)	133	133
North Yakima, Federal.....	538	1,110	1 1,536	(²)	890	796
Seattle—						
Federal.....	203	562	1 1,568	(²)	355	278
Municipal.....	4,787	8,358	(²)	(²)	8,494	7,701
Spokane—						
Federal.....	109	177	1 480	(²)	152	150
Municipal.....	2,742	3,507	(²)	(²)	3,400	3,080
Tacoma, Federal-municipal.....	671	1,871	1,432	18	1,559	1,510
Walla Walla, Federal.....	225	258	1 507	(²)	316	296
Total.....					³ 15,667	14,571
West Virginia:						
Charleston, State.....	4 50	4 2,500	4 50	(²)	4 50	4 50
Wisconsin:						
La Crosse, State.....	220	326	286	(²)	266	157
Madison, Federal.....	0	0	1 56	(²)	56	0
Milwaukee, State.....	2,396	4,893	4,396	(²)	4,475	3,268
Oshkosh, State.....	208	347	245	(²)	212	149
Superior, State.....	519	1,136	1,018	(²)	1,155	747
Total.....					6,164	4,321

CANADA.

Quebec:						
Montreal, provincial.....	428	1,341	1 601	(²)	803	684
Quebec, provincial.....	(²)	566	1 335	(²)	(²)	224
Total.....					(²)	908

1 Number applying for work.
2 Not reported.

³ Exclusive of Everett municipal office, not reported.
⁴ Evidently estimates.

CONCILIATION WORK OF THE DEPARTMENT OF LABOR, MAY 16 TO JUNE 15, 1917.

Under the organic act of the department, which gives the Secretary of Labor the authority to mediate in labor disputes through the appointment, in his discretion, of commissioners of conciliation, the Secretary exercised his good offices between May 16, 1917, and June 15, 1917, in 61 labor disputes. The companies involved, the number of employees affected, and the results secured, so far as information is available, were as follows:

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STATEMENT SHOWING NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, SUBSEQUENT TO MAY 15, 1917.

Name.	Workmen affected.		Result.
	Directly.	In-directly.	
Strike of teamsters operating at terminals of Pennsylvania R. R., New York, N. Y.	600	1,500	Adjusted.
Strike of shipbuilding employees, Mathis Yacht Building Co., Camden, N. J.	200	.....	Do.
Strike of iron molders, White Mountain Ice Cream Freezer Co., Heighton Co., Flathers Co., Nashua Cooperative Foundry Co., Nashua, N. H.	112	.....	Pending.
Strike, Cyrus Currier & Sons, iron molders, Newark, N. J.	19	50	Adjusted. ¹
Controversy between the Pickering Land & Timber Co., and its negro employees, Cravens, La.	.....	.....	Do.
Strike, Martin Dye & Finishing Co., Bridgeton, N. J.	207	.....	Nothing to arbitrate.
Strike, City Baking Co., Baltimore, Md.	250	.....	Unable to adjust.
Controversy, Vari Lace Co., New York City	14	106	Adjusted.
Labor dispute, Regina Lace Mills, Central Falls, R. I.	450	.....	Do.
Controversy, Simmons Saddlery Co., St. Louis, Mo.	150	300	Pending.
Controversy between Raincoat Makers Union and H. E. Lazarus & Co., New York.	500	.....	Adjusted.
Controversy, Mertens Coal Co., Cumberland, Md.	100	.....	Do.
Controversy between the coal miners and operators in Pennsylvania, bituminous coal district No. 2.	75,000	.....	Do.
Strike, Boston & Albany R.R. and its maintenance of way employees, Boston.	1,000	.....	Pending.
Threatened strike of coal mining employees, West Virginia Pulp & Paper Co., Luke, Md.	100	3,400	Adjusted.
Strike, textile workers, Parker Hosiery Mill, Frostburg, Md.	97	.....	Do.
Strike, McGraw Rubber & Tire Co., East Palestine, Ohio.	1,200	100	Pending.
Threatened strike, Drop Forge Companies, Cleveland, Ohio. (Champion Machine & Forging Co., adjusted).	1,275	In definite.	3 pending.
Strike of pattern makers, Trenton, N. J.	.....	.....	Adjusted.
Strike, American Foundry Co., Indianapolis, Ind.	.....	.....	Pending.
Strike of dredgemen, Great Lakes.	.....	.....	Adjusted.
Controversy between New York, New Haven & Hartford R. R. Co. and its mechanical employees, Boston, Mass.	5,770	.....	Do.
Controversy between Arizona Copper Co., Detroit Copper Co., and Shannon Copper Co., Clifton-Morenci, Ariz.	5,000	.....	Do.
Strike, Dresden Lace Works, Norwalk, Conn.	.....	.....	Do.
Strike, pattern makers, job shops, Providence, R. I.	.....	.....	Do. ¹
Strike, Brothers Valley Coal Co., Macondaldton, Pa.	400	.....	Do.
Controversy, Lake Torpedo Boat Co., and its pattern makers, Bridgeport, Conn.	.....	.....	Do.
Strike of metaliferous miners, United Verdi Copper Co., Jerome, Ariz.	1,500	1,000	Do.
Strike at Terry Run mines, Homer City Coal Co., Homer City, Pa.	.....	.....	Pending.
Lockout, building trades, Omaha, Nebr.	4,000	7,000	Do.
Threatened strike of machinists, S. L. Moore Co., Elizabeth, N. J.	.....	.....	Do.
Labor dispute, Great Northern, Northern Pacific & Soo Railroad Co.'s and other machinists, St. Paul, Minn.	.....	.....	Strike averted.
Strike, coal miners, N. Y. Mining Co., Allegany, Md.	140	.....	Pending.
Controversy between the Globe Iron Co., Jackson Iron & Steel Co., Star Furnace Co., and their laborers, Jackson, Ohio.	400	.....	Adjusted.
Threatened strike of clerks, Pere Marquette R. R. Co.	.....	.....	Pending.
Threatened strike of railway clerks and other members of the Brotherhood of railway clerks, employees of Baltimore & Ohio R. R. on Cumberland division.	189	All lines on B. & O.	Adjusted.
Strike, William Cramp & Sons, Ship & Engine Co., Philadelphia, Pa.	375	6,000	Do.
Lockout, car department, employees, Missouri, Oklahoma & Gulf R. R. Co., Muskogee, Okla.	80	400	Pending.
Strike of shipbuilders (52 shipping firms), New York Harbor and vicinity.	3,000	7,000	Do.
Controversy between Wabash R. R. Co. and its federated crafts, Decatur, Ill., and other points along system.	.....	.....	Do.
Threatened lockout, textile workers, Chattanooga, Tenn.	.....	.....	Do.
Threatened strike, Boston & Maine R. R. Co., delivery clerks and truckers at all freight houses on system outside of Boston; baggagemen and miscellaneous passenger station employees at all stations as well as crossing tenders.	.....	.....	Adjusted. ²
Strike, Baltimore & Ohio Tidewater Terminal, Jackson Street Terminal Wharf on Delaware River, Philadelphia.	12	.....	Pending.

¹ Matter adjusted in 4 shops and agreement reached. Agreement subsequently broken.

² Commissioner on ground. His presence instrumental in effecting settlement.

STATEMENT SHOWING NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR, THROUGH ITS COMMISSIONERS OF CONCILIATION, SUBSEQUENT TO MAY 15, 1917—Concluded.

Name.	Workmen affected.		Result.
	Directly.	In-directly.	
Strike of machinists, Newton Machine Tool Works and other machine shops, Philadelphia, Pa.			Pending.
Controversy, Alberger Pump & Condenser Co., Newburgh, N. Y.			Do.
Lockout, Adrian Furnace Co., Punxsutawney and Dubois, Pa.			Do.
Strike of miners, Beerwind & White Coal Co., St. Michael and Janesville, Pa.			Do.
Strike at Chas. G. Blake & Co., granite works, Chicago, Ill., and Mount Airy, N. C.			Do.
Strike, National Carbon Co., Clarksburg, W. Va.			Adjusted.
Controversy, Freeport Sulphur Co., Freeport, Tex.			Pending.
Strike, Peale mines, Nos. 2, 4, and 5, Portage, Pa.			Do.
Strike, Dahlstrom Metallic Door Co., Jamestown, N. Y.			Do.
Controversy between Pennsylvania R. R. Co. and engine hoist employees of Schuylkill division.			Do.
Threatened strike, freight handlers, Boston & Maine R. R. Co., Boston, Mass.			Adjusted.
Strike of Puddlers, A. M. Byers Co., Gerard, Ohio.	800	1,300	Do.
Threatened strike, shipyards, Portland, Oreg.			Pending.
Strike, Brunswick Construction Corporation, Brunswick, Ga.	500		Adjusted.
Strike at Davis and Delmar Mines, Flemington, W. Va.			Do.
General strike in the Lever branch of lace industry			Pending.
Controversy, Wagner Electric Co., St. Louis, Mo.			Do.
Bakers' strike, Denver, Colo.			Do.

The following cases have been disposed of:

- Strike, Llewellyn Iron & Steel Co., Torrance, Cal. Adjusted.
- Strike, Locomobile Co., Bridgeport, Conn. Adjusted.
- Threatened strike, pattern makers, Westinghouse Shops, Cleveland, Ohio. Matter has adjusted itself. Trafford City matter pending.
- Threatened strike, boilermakers, helpers, and other employees, Standard Oil Co. Refining Works, Cleveland, Ohio. Adjusted.
- Lockout, Imperial Works, Oil City, Pa. Adjusted.
- Controversy between Newport News Shipbuilding & Dry Dock Co. and its machinists, Newport News, Va. Adjusted.
- Strike, car workers, New York Central Railroad, Clearfield, Pa. Adjusted.
- Controversy between Washington Steel & Ordnance Co. and machinists, Giesboro Point, D. C. Adjusted.
- Controversy between Anaconda Copper Co. and boilermakers and iron workers, Anaconda, Butte, and Great Falls, Mont. Adjusted.
- Strike of coal miners, West Virginia, thin vein field. Seven adjusted.
- Strike, Liberty Lace & Netting Works, New York. Adjusted.
- Threatened strike, mechanics, Boston & Albany Railroad, Boston. Partial adjustment.
- Strike of longshoremen, Porto Rico and Bull Insular Steamship Co., New York and Porto Rico. Unable to adjust.
- Controversy between ferry-boat companies and employees, San Francisco, Cal. Strike averted.
- Strike of machinists, ten shops, Philadelphia, Pa. Unable to adjust.

IMMIGRATION IN APRIL, 1917.

The number of immigrant aliens admitted to the United States during the year 1916 was 355,767, as compared with 258,678 for the year 1915, an increase of 97,089, or 37.5 per cent. There was also an increase from month to month during 7 of the 12 months in 1916. During the current year the figures for the first three months show a considerable decrease from month to month. The decrease from the preceeding month for January, February, and March, 1917, is 19.9, 22.3, and 19.4 per cent, respectively. During April, however, the number of immigrant aliens admitted shows an increase of 32.3 per cent over the number admitted in March. During May immigration reached the point of low ebb, only 10,487 immigrant aliens having been admitted, the smallest number for any month in many years. As compared with April the figures for May show a decrease of 48.9 per cent. These facts are brought out in the following table:

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS 1913 TO 1917.

Month.	1913	1914	1915	1916	1917	
					Number.	Per cent increase over preceding month.
January.....	46,441	44,708	15,481	17,293	24,745	¹ 19.9
February.....	59,156	46,873	13,873	24,740	19,238	¹ 22.3
March.....	96,958	92,621	19,263	27,586	15,512	¹ 19.4
April.....	136,371	119,885	24,532	30,560	20,523	32.3
May.....	137,262	107,796	26,069	31,021	10,487	¹ 48.9
June.....	176,261	71,728	22,598	30,764	.....	.....
July.....	138,244	60,377	21,504	25,035	.....	.....
August.....	126,180	37,706	21,949	29,975	.....	.....
September.....	136,247	29,143	24,513	36,398	.....	.....
October.....	134,440	30,416	25,450	37,056	.....	.....
November.....	104,671	26,298	24,545	34,437	.....	.....
December.....	95,387	20,944	18,901	30,902	.....	.....

¹ Decrease.

Classified by races, the number of immigrant aliens admitted to and emigrant aliens departing from the United States during April, 1916 and 1917, was as follows:

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IMMIGRANT ALIENS ADMITTED TO AND EMIGRANT ALIENS DEPARTING FROM THE UNITED STATES, APRIL, 1916 AND 1917.

Race.	Admitted.		Departed.	
	April, 1916.	April, 1917.	April, 1916.	April, 1917.
African (black).....	287	869	119	103
Armenian.....	92	55	13	3
Bohemian and Moravian.....	45	45	1	2
Bulgarian, Servian, Montenegrin.....	317	63	2	5
Chinese.....	100	108	111	113
Croatian and Slovenian.....	44	21	3	.....
Cuban.....	185	222	69	70
Dalmatian, Bosnian, Herzegovinian.....	6	19	.....	.....
Dutch and Flemish.....	481	209	54	39
East Indian.....	2	5	3	2
English.....	3,006	2,852	471	315
Finnish.....	453	244	37	59
French.....	2,581	1,969	136	91
German.....	1,162	845	60	35
Greek.....	4,194	476	107	43
Hebrew.....	1,036	601	11	5
Irish.....	1,472	1,321	81	42
Italian (north).....	390	220	293	53
Italian (south).....	4,554	1,156	655	429
Japanese.....	893	937	49	83
Korean.....	21	22	2	4
Lithuanian.....	49	19	.....	.....
Magyar.....	59	31	32	1
Mexican.....	1,504	1,276	43	69
Pacific Islander.....	.....	1	.....	.....
Polish.....	305	177	16	.....
Portuguese.....	1,187	657	91	109
Roumanian.....	126	53	10	2
Russian.....	316	237	420	209
Ruthenian (Russniak).....	129	92	4	.....
Scandinavian.....	2,219	1,190	185	119
Scotch.....	1,175	1,267	121	64
Slovak.....	44	21	6	.....
Spanish.....	1,038	2,644	130	113
Spanish-American.....	169	243	23	41
Syrian.....	70	64	7	5
Turkish.....	20	3	4	2
Welsh.....	79	68	10	2
West Indian (except Cuban).....	94	140	59	40
Other peoples.....	655	89	63	7
Not specified.....	.....	.....	581	512
Total.....	30,560	29,523	4,082	2,777

LIST OF OFFICIAL DOCUMENTS RELATING TO LABOR AND THE
WAR IN GREAT BRITAIN RECENTLY RECEIVED BY THE U. S.
BUREAU OF LABOR STATISTICS.

ACTS OF PARLIAMENT.

- Ministry of munitions act, 1915 (5 and 6 Geo. 5, ch. 51).
Munitions of war act, 1915 (5 and 6 Geo. 5, ch. 54).
Munitions of war (amendment) act, 1916 (5 and 6 Geo. 5, ch. 99).
Police, factories, etc. (miscellaneous provisions) act, 1916 (6 and 7, Geo. 5, ch. 31).
Defense of the realm manual (Manuals of emergency legislation), third enlarged edition, revised to February 28, 1917. Contains defense of realm acts, regulations, and orders (March, 1917). (Includes food orders.)
Defense of the realm regulations (monthly edition), consolidated and revised to March 31, 1917.
Agreement regarding acceleration of output on Government work, between trade unions and Government, March 17-19, 1915. (Known as treasury agreement of March, 1915.)

MEMORANDA AND CIRCULARS ISSUED BY THE MINISTRY OF MUNITIONS.

- Memorandum (L. 30) containing circulars, etc., bearing on dilution of labor.
Memorandum (L. 30) containing circulars, etc., bearing on dilution of labor. Later and revised issue of L. 30.
Circular (M. W. M. T. 2) on munitions tribunals, outlines organization and gives list of those established.
Constitution and functions of local labor advisory boards. (National advisory committee on war output.)
Memorandum (M. M. 84) for the guidance of persons seeking employment on munitions.
Memorandum (badges, 8) war-service badges. Instructions for the guidance of employees, August, 1916.
Army reserve munitions workers (A. R. M. W. 40). Notes for the guidance of employers to whose employment men are assigned. October, 1916.
War-munitions volunteers (W. M. V. 40). Notes for the guidance of employers to whom workmen are transferred by authority of the ministry of munitions. December, 1915.
(W. M. V. 19.) Form for use by employers in asking for war-munitions volunteers from the labor exchanges.
Memorandum (M. M. 14) for the guidance of employers in regard to leaving certificates, January, 1917. (Superseded similar memorandum of September, 1916.)
Memorandum (M. M. 16) on leaving certificates issued for the guidance of workpeople, January, 1917.
(L. 47a.) Conditions under which aliens may be employed in munitions factories.
Memorandum (M. M. 95) on records for the purposes of the munitions of war act.
(M. M. 26.) Form for "Report of changes in workshop rules made since the treasury agreement of March, 1915." (Prepared by national advisory committee on war output.)
(M. M. 56.) Form for record of departure from working conditions, etc.

- Rules made by the Minister of Munitions under munitions of war act, regarding limitation of profits, March 30, 1917.
- (L. 42.) Rewards for inventions, etc., in controlled establishments.
- (M. M. 13.) Duties of lady superintendents (sometimes called lady welfare supervisors).
- (Welfare B. 14.) Suggested scheme for boy supervision. (With forms.)
- Memorandum to welfare supervisors of boys.
- Memorandum (training 3, November, 1915). Scheme for training semiskilled munition workers in technical schools.
- (L. 85.) Letter regarding advance in wage rates of females. Dated April 4, 1917. [Detailed orders regarding this matter not yet received by Bureau.]

STATUTORY RULES AND ORDERS UNDER THE MUNITIONS OF WAR ACTS.

- 1915, No. 641. (Industrial disputes.)
- 1915, No. 671 (S. 43.) (Factory discipline.)
- 1915, No. 839. (Establishments covered.)
- 1915, No. 1000 (S. 61). War-service badges.
- 1915, No. 1001. War-service badges.
- 1915, No. 1002. (Factory discipline.)
- 1916, No. 106. (Factory discipline.)
- 1916, No. 107. (Establishments covered.)
- 1916, No. 108 (S. 8). Tribunals.
- 1916, No. 121. Leaving certificates.
- 1916, No. 123. Tribunals.
- 1916, No. 127 (S. 9). (Factory discipline.)
- 1916, No. 137 (L. 3). Tribunals.
- 1916, No. 159. Tribunals.
- 1916, No. 179 (S. 10). Tribunals.
- 1916, No. 180. Tribunals.
- 1916, No. 181. Employment and remuneration. (Females.)
- 1916, No. 182. Employment and remuneration. (Wages of semiskilled and unskilled men.)
- 1916, No. 191. Employment of aliens.
- 1916, No. 279. Employment of exmunition workers.
- 1916, No. 314. (Establishments covered.)
- 1916, No. 315 (S. 22.) Tribunals.
- 1916, No. 355. (Industrial disputes.)
- 1916, No. 411. Employment and remuneration. (Females.)
- 1916, No. 412. Employment and remuneration. (Wages of semiskilled and unskilled men.)
- 1916, No. 447. Remuneration of women and girls on munition work of a class not recognized as men's work.
- 1916, No. 450. Employment of exmunition workers.
- 1916, No. 456. Employment and remuneration of girls under 18 years of age on munition work of a class customarily done by male labor of 18 years and over.
- 1916, No. 512. Employment of exmunition workers.
- 1916, No. 530. (Establishments covered.)
- 1916, No. 549. (Limitation of profits.)
- 1916, No. 586. Employment and remuneration. (Females.)
- 1916, No. 587. Employment and remuneration. (Females.)

- 1916., No. 589. Employment and remuneration. (Wages of semiskilled and unskilled men.)
- 1916, No. 615. Employment of exmunition workers.
- 1916, No. 618. Remuneration of women and girls on munitions work of a class not recognized as men's work.
- 1916, No. 621. Employment and remuneration. (Females.)
- 1916, No. 649. Tribunals.
- 1916, No. 662. (Factory holidays.)
- 1916, No. 663. (Factory holidays.)
- 1916, No. 664 (S. 37). (Factory holidays.)
- 1916, No. 665 (S. 38). (Factory holidays.)
- 1916, No. 703. Employment and remuneration. (Females.)
- 1916, No. 704. Employment and remuneration. (Females.)
- 1916, No. 718 (S. 46). Tribunals.
- 1916, No. 719. Tribunals.
- 1916, No. 732. (Industrial disputes.)
- 1916, No. 759. Employment and remuneration. (Females.)
- 1916, No. 791. Employment of exmunition workers.
- 1916, No. 813. Employment of exmunition workers.
- 1916, No. 855. (Establishments covered.)
- 1916, No. 856. Employment of exmunition workers.
- 1916, No. 888. Employment and remuneration. (Females.)
- 1916, No. 890. Employment of exmunition workers.
- 1917, No. 9. Employment and remuneration. (Females.)
- 1917, No. 10. Employment and remuneration. (Females.)
- 1917, No. 48. Employment and remuneration. (Females.)
- 1917, No. 49. Employment and remuneration. (Females.)
- 1917, No. 71. Employment and remuneration. (Wages of semiskilled and unskilled men.)
- 1917, No. 72 (S. 7). Tribunals.
- 1917, No. 142. (Establishments covered.)
- 1917, No. 143. Employment of ex-munition workers.
- 1917, No. 180. Employment of ex-munition workers.
- 1917, No. 282. (Establishments covered.)
- 1917, No. 313. Employment and remuneration. (Females.)
- 1917, No. 347. (Establishments covered.)
- 1917, No. 348. Employment of ex-munition workers.

MEMORANDA, HEALTH OF MUNITION WORKERS COMMITTEE OF THE MINISTRY OF MUNITIONS.

(Issued at various dates 1915 to 1917.)

- No. 1. Sunday labor.
- No. 2. Welfare supervision.
- No. 3. Industrial canteens.
- No. 4. Employment of women.
- No. 5. Hours of work.
- No. 6. Canteen construction and equipment (appendix to No. 3).
- No. 7. Industrial fatigue and its causes.
- No. 8. Special industrial diseases.
- No. 9. Ventilation and lighting of munition factories and workshops.
- No. 10. Sickness and injury.
- No. 11. Investigation of workers' food and suggestions as to dietary. (Report by Leonard E. Hill, F. R. S.)

- No. 12. Statistical information concerning output in relation to hours of work. (Report by H. M. Vernon, M. D.)
- No. 13. Juvenile employment.
- No. 14. Washing facilities and baths.
- No. 15. The effect of industrial conditions upon eyesight.
- No. 16. Medical certificates for munition workers.
- No. 17. Health and welfare of munition workers outside the factory.
- Interim report (Feb., 1917) on industrial efficiency and fatigue. Contains Memoranda 7 and 12; and three other studies, entitled: "The comparative efficiencies of daywork and nightwork," "The causes and conditions of lost time," and "Incentives to work, with special reference to wages."

MISCELLANEOUS REPORTS, ETC.

- Annual report of the chief inspector of factories and workshops for the year 1916. (1917.)
- Juvenile Education. Final report of departmental committee on juvenile education in relation to employment after the war. Vol. I. Report, March 16, 1917 (Cd. 8512).
- Farm of Borgie. Memorandum respecting farm presented by Duke of Sutherland for settlement of soldiers and sailors, November 10, 1916. (By undersecretary for Scotland.)
- Licensing partially disabled men as drivers of public motor vehicles. Report of special committee, July 1, 1916.
- Report of committee of privy council for scientific and industrial research for the year 1915-16. (1916.)
- File of letter forms to employers and workers, issued by ministry of munitions, regarding various matters arising under the acts, orders, etc.
- Posters issued by ministry of munitions, for use in factories, regarding orders issued, etc.
- File of forms used in priority of work regulations, issued by ministry of munitions.

OFFICIAL PUBLICATIONS RELATING TO LABOR.

UNITED STATES.

ALASKA.—*Report of the Territorial Mine Inspector, for the year 1916.* [Juneau, February 28, 1917] 86 pp.

This report indicates that 1916 was the most prosperous year in the mining industry of Alaska "by reason of the excessive demand for copper and by the continuance of the European war." The mineral production was valued at \$52,939,754, of which copper contributed \$35,314,993. This is an increase in the total value of \$20,085,754 over the preceding year. The value of gold and silver mined was \$17,087,214, or an increase of \$335,214 over 1915. There were approximately 9,125 men employed in mining during the year 1916. Twenty-nine fatal, 194 serious, and 568 slight accidents were reported in all mining, making a fatality rate of 3.18 per 1,000 employed. However, it is explained that this is hardly a fair rate, since 4,925, or 54 per cent, of the men were in placer mines which were operated on an average of but 180 days in the year, while the lode mines, employing 4,200 men, were operated an average of 360 days. Taking these facts into consideration the 7 deaths in placer mining show a fatality rate of 1.42 while the 22 deaths in lode mining show a fatality rate of 5.24. There was no strike involving a suspension of work in any of the mines of the Territory during the year.

A number of amendments to the mine-inspection act and the workmen's compensation law are suggested. In connection with the latter a provision is proposed to prevent unscrupulous attorneys getting hold of ignorant injured employees or beneficiaries and charging them exorbitant fees to collect the compensation due when often all that is necessary is proof that they are the injured parties or beneficiaries. It is also suggested that there should be a provision for medical attention for the injured for a certain period, and an amendment prescribing a definite time for the payment of compensation after two weeks' disability, say weekly or monthly.

DALLAS (TEXAS).—*Report of survey committee to the Dallas Wage Commission and submitted by them to the honorable mayor and board of commissioners of the city of Dallas, April 25, 1917.* [Dallas, 1917] 16 pp.

A digest of this report appears on pages 136 and 137 of this issue of the MONTHLY REVIEW.

HAWAII.—*Second annual report of the industrial accident board, city and county of Honolulu, for the 12 months ending December 31, 1916. Workmen's Compensation Act [Honolulu] Feb. 28, 1917.* 16 pp.

To the end of 1916, 1,233 employers had filed security for their compensation payments to their employees, this figure, in the opinion of the commission, not yet "approaching the full quota of the employers of the city and county of Honolulu subject to the act." A total of 2,272 accidents was reported during the year, 2,180 being minor accidents. Twenty-eight death claims were given a hearing. Of these, 11 (31 dependents) were awarded weekly compensation which will amount to \$30,210.96 if payments are made for the entire 312 weeks as provided by law; and 7 lump-sum settlements were made, amounting to \$14,271.28, or an average of \$2,038.75 each. These benefits are exclusive of hospital and medical bills and the sums paid for funeral expenses. The report contains a summary of accident statistics for the 18 months ending December 31, 1916, which shows 33 fatal accidents, 243 occasioning no disability, 1,866 causing disability terminating in less than 14 days, and 698 causing disability extending over periods varying from 3 to 10 weeks. In 2,109 cases no compensation was paid beyond the medical bills. Exclusive of 114 cases not closed, the aggregate weekly compensation amounted to \$10,135.63, with \$5,634.30, \$12,713.41, and \$1,049.60 additional for hospital, medical, and funeral expenses, respectively.

INDIANA.—*State Board of Education. Educational Bulletin No. 18. Indiana Survey series No. 3. Report of the Richmond, Indiana, survey for vocational education. Indianapolis, Dec. 1, 1916.* 599 pp. Illustrated.

This report is noted on pages 149 to 152 of this issue of the MONTHLY REVIEW.

MASSACHUSETTS.—*Bureau of Statistics. Eighth annual report on Labor organizations for the year 1915. Labor Bulletin No. 118. Boston, 1917.* 59 pp.

A digest of this report appears on pages 162 and 163 of this issue of the MONTHLY REVIEW.

— *Third annual report of the teachers' retirement board for the year ending December 31, 1916. Public Document No. 109. Boston, 1917.* 20 pp.

This report is noted on pages 152 to 154 of this issue of the MONTHLY REVIEW.

NEW YORK.—*State Bureau of Municipal Information. Municipal Public Markets. Report No. 229. Albany, March, 1917.* 12 pp. 6 insert tables.

This report is noted on pages 131 to 134 of this issue of the MONTHLY REVIEW.

— (CITY).—*Report on the increased cost of living for an unskilled laborer's family in New York City; prepared by the Bureau of Personal Service of the Board of Estimate and Apportionment.* [New York] February, 1917. 32 pp.

This report is noted on pages 138 to 140 of this issue of the MONTHLY REVIEW.

PORTO RICO.—*Special report of the Workmen's Relief Commission, covering operation under the workmen's compensation act from July 1, 1916, to January 31, 1917. San Juan, 1917. 114 pp.*

A brief review of this report appears on pages 118 and 119 of this issue of the MONTHLY REVIEW.

UTAH.—*Eleventh Biennial Report of the State Coal Mine Inspector, 1915-16. [Salt Lake City, 1917.] 283 pp.*

Is nearly altogether text matter, embracing the quarterly reports of the several deputy inspectors on conditions in the mines as to ventilation, sprinkling, gas, timbering, first-aid supplies, safety fences, manways, etc. During 1915 there were 11 fatal accidents, 10 underground and 1 on the surface; 2 were married men and 9 were single men. There were also 28 serious accidents and 155 nonserious, making a total of 194 accidents. During 1916 there were 22 fatal accidents or 5.88 per 1,000 men employed. These accidents left 13 widows and 47 fatherless children. There were also 37 serious and 202 nonserious accidents, making a total of 261 accidents.

WEST VIRGINIA.—*Report of the State compensation commissioner to June 30, 1916. [Charleston, 1916.] 139 pp.*

See pages 121 to 123 of this issue for digest of this report.

UNITED STATES.—*Department of the Interior, Bureau of Education. Report of the Commissioner of Education for the year ended June 30, 1916. Washington, 1916. Vol. I, XXVII, 692 pp. Vol. II, VIII, 663 pp.*

The first volume of this report contains a comprehensive interpretive survey of the progress of education in the United States for the school year of 1915-16, grouped under the following headings: General survey of education; educational legislation; education in the larger cities; education in the smaller cities; rural education; elementary, secondary, and higher education; vocational education; medical, legal, engineering, and commercial education; agricultural education; school and home gardening; home economics; education in the home; kindergarten education; educational hygiene; education of immigrants; educational surveys; educational extension; library activities; educational work of American museums, the churches, the Young Men's Christian Association, the Boy Scouts, Girl Scouts, and Campfire Girls; educational boards, foundations, and associations; and education in the territories and dependencies.

In addition the first volume contains a similar survey of educational progress in many foreign countries, the statistical material being arranged in three sections: Elementary, secondary, and higher. This is the first time in the history of the Bureau of Education that such a presentation has been made. It is believed that it will meet, in some degree at least, the demand arising from the new interest which educators and statesmen in this country are taking in all forms of education in other countries, which interest will be greatly increased when European countries now at war undertake their reconstruction after the war is over.

The second volume of the report which is devoted to the educational statistics of 1915 shows a total enrollment in schools and colleges in 1914 of 22,462,342 (20,104,688 in public schools and 2,357,654 in private schools), the complete enrollment for 1915 not being available at the time of the publication of the report.

In the introduction to his report the commissioner of education calls attention to the following phases of educational interest and progress deserving special consideration: (1) The continued increase of interest in vocational education indicated partly by the passing of the Federal vocational education bill through the Senate without opposition and the apparent disappearance of opposition to it in the House of Representatives; (2) the inauguration of ex-

tension education in agriculture and home economics under the provisions of the Smith-Lever Act, appropriating Federal funds for this purpose; (3) the progress in the reorganization of secondary education and the division of the 12 years of elementary and secondary schooling into two equal parts of 6 years each instead of the present division of 8 and 4 years; (4) the increase of interest in the improvement of rural schools through longer terms, better teachers, better administration and supervision, consolidation, the erection of teachers' homes, and the better adjustment of courses of study to the needs of rural life; (5) the widespread interest in offering to immigrants from foreign countries opportunity to learn to understand and speak the English language, and for such other education as will prepare them for modern industrial, social, and civic life, and for possible citizenship; (6) the increase of interest in teaching adult natives to read and write, and in offering to those of very meager education opportunities to extend their education, in night schools and elsewhere; (7) the increase of interest in the schools as community forums and social centers; (8) the extension of interest in home gardening for children under the direction of the schools as outlined by this bureau, a form of occupation and industrial education which is made still more important by the passage of State and Federal child-labor laws; (9) the increased interest in military training and in the health and physical development of children due to the awakened consciousness of the need of national preparedness for peace and for possible defense against an invading foe.

UNITED STATES.—*Department of Interior, Bureau of Education. Secondary Agricultural Schools in Russia, by W. S. Jesien. Bulletin, 1917, No. 4, Washington, 1917. 22 pp.*

This pamphlet is issued by the Bureau of Education because "the extension of agricultural education in this country and the desire to make instruction in agriculture at the same time more practical and also more cultural gives special interest to accounts of agricultural schools in other countries." It treats, among other things, of maintenance of agricultural schools, admission of students, social class of students, free scholarships, courses of study, practical training, training of teachers, and opportunities for higher agricultural education.

— *Department of Labor. Bureau of Naturalization. The work of the public schools with the Bureau of Naturalization in the preparation for citizenship responsibilities of the candidate for naturalization. Washington, 1917, 50 pp.*

— *Children's Bureau. Care of dependents of enlisted men in Canada, by S. Herbert Wolfe. Miscellaneous series No. 10. Bureau publication No. 25. Washington, 1917. 56 pp.*

This report is noted on pages 9 to 14 of this issue of the MONTHLY REVIEW.

This is an extract from the annual report of the Commissioner of Naturalization and gives an account of how the public schools of the country and the bureau are cooperating to give aliens an opportunity to become thoroughly familiar with American institutions and responsive to Americanizing influences which will make them better citizens. During the year 1915-16, 1,336 petitions for naturalization were denied, because of ignorance of American institutions, while 1,486 suffered from the same cause during the preceding year. On August 15, 1915, schools in 38 towns and cities throughout the country were cooperating with the bureau; on July 1, 1916, the number of cities and towns was 613. It is estimated that approximately 80 per cent of adult foreigners attending night schools in the largest cities have taken no steps toward securing American citizenship, while about 18 per cent have taken out their first papers and only 2 per cent have secured certificates of naturalization. In some States as high as 94 per cent have been reported as having no citizenship.

This would seem to call for some attention on the part of the local authorities, and emphasizes more clearly than any other one element the desirability of teaching in these classes the true spirit of our institutions of government.

UNITED STATES.—*Public Health Service. Public Health Reports, June 1, 1917. Washington, pp. 835 to 883.*

Contains an article by J. W. Schereschewsky, surgeon, United States Public Health Service, on maintenance of health in industries, its relation to the adequate production of war materials, in which the author emphasizes the extreme importance of taking measures to safeguard the health of the three and one-half to four million workers in industries producing war materials, such as the metal trades generally, and the mining, rubber, shipbuilding, chemical, leather, and motor-vehicle industries. Attention is drawn to the experience of England along these lines. The article takes up particularly the need for proper sanitation of work places and of industrial communities, and the importance of preventing undue fatigue and of careful medical supervision of workers.

FOREIGN COUNTRIES.

AUSTRALIA.—[*Labor Department*] *Report on the feasibility of adopting the practice of baking bread by day in Victoria, and on the operation of day baking in other States. Melbourne, 1916. 10 pp.*

After visits to Sidney, Brisbane, and Adelaide, where day baking of bread was in operation, the author of this report comes to the conclusion that day baking in Victoria would (1) benefit the general public by causing the production of better-quality bread; (2) benefit the bakers' employees by improving their conditions of life and work; and (3) put the master bakers in a position not any less advantageous than at present.

It is stated that 1,057 men and boys were, at the time of the investigation, engaged in the various processes of bread making in Victoria, 18 of them being dough makers exclusively and would necessarily have to work at night. Thus the change to daywork would liberate 214 boys and 825 men from nightwork. The master bakers, it appears, were most strongly opposed to a change, believing that day baking would adversely affect their profits, but in Brisbane, where day baking had been in operation for about 11 months, this opposition seemed almost entirely to have disappeared. It was not possible to obtain definite data on the relative cost of baking by day and by night, although one baker said the men work better in the daytime and give a better return than night workers. One difficulty in the way of changing to the practice of baking bread by day seemed to be the fact that a demand for fresh bread could not be met satisfactorily if it should be baked on the day before delivery. However, experiments conducted in the retardation of the staling process developed the fact that bread may be kept fresh for as long as 24 hours if, after it is allowed to cool for five hours, it is placed in a practically air-tight container at a temperature of 80° F. Bread thus treated, it was found, can be kept in reasonably fresh condition for a week, and on being again exposed to the air does not deteriorate any more rapidly than freshly baked bread. The report states that the law which requires bread to be sold by weight works a hardship upon the master bakers and should be repealed, since "the weight of a loaf does not measure the quantity of food it contains," but "is more an index of the amount of water or of the length of time it has been in the oven. From the time a loaf of bread leaves the oven its weight is constantly decreasing." Thus, in order to maintain the required weight, the baker is encouraged to underbake his bread and the public loses the protection which the law seeks to secure.

CANADA (PROVINCE OF QUEBEC).—*General Report of the Minister of Public Works and Labor of the Province of Quebec for the year ending June 30, 1916. Quebec, 1916. 147 pp. Illustrated.*

Of the activities of the ministry of public works and labor of the Canadian Province of Quebec during the fiscal year 1915-16, dealt with in the present report, those discussed under the headings inspection of industrial establishments, provincial employment bureaus, trades disputes act, examination of stationary engineers, and fair wages are of special interest to labor. The volume gives the individual reports of the factory inspectors of the various districts but no summary of their combined activities. The reports of the individual employment bureaus indicate a general excess of demand for skilled and unskilled labor over the available supply.

FRANCE.—*Bulletin du Ministère du Travail et de la Prévoyance Sociale. Paris, December, 1916. Pages 165-167.*

The pages noted contain a brief circular directed to employers relative to the lodging of artillery and munition workers in France, which is reviewed on pages 42 and 43 of this issue of the MONTHLY REVIEW.

— *Bulletin du Ministère du Travail et de la Prévoyance Sociale. Paris, Janv.-Fév.-Mars, 1917. Pages 71-73, 16*-19*.*

The measures of protection for working mothers in France are set forth in the pages noted, and an article on this subject appears on pages 39 to 41 of this issue of the MONTHLY REVIEW.

GREAT BRITAIN.—*Board of Trade. The food supply of the United Kingdom. A report drawn up by a committee of the Royal Society at the request of the president of the Board of Trade. London, 1917. 35 pp.*

This report is noted on pages 69 to 78 of this issue of the MONTHLY REVIEW.

— *Departmental committee on the settlement and employment of sailors and soldiers on the land. Minutes of evidence taken before the departmental committee appointed by the president of the board of agriculture and fisheries to consider the settlement and employment on the land in England and Wales of discharged sailors and soldiers. London, 1916. 399 pp. Price 3s. 6d.*

This is part 1 of the final report of the committee and consists of evidence upon which the recommendations of the committee were based. Part 2 of the final report, which gives an account of the investigations of the committee and its recommendations, was noted in the MONTHLY REVIEW for September, 1916, pages 87 to 90.

— *Forty-fifth Annual Report of the Local Government Board, 1915-16. Supplement containing the report of the medical officer for 1915-16. London, 1917. xl, 77 pp.*

Contains a section on maternity and child-welfare work during the war (pages xxxiv to xl), calling attention to the fact that during the war the official work for child welfare has been increased. The number of health visitors, which in 1914 was 600, was 812 at the end of 1915, and since then has been further increased to about 1,000. This means one health visitor, approximately, to 800 births annually. A steady effort is being made to reach the standard of one health visitor to 500 births. The notification of births act has been extended to the whole of England and Wales, and under its terms the county councils have been granted considerable powers for the purpose of the care of expectant mothers, nursing mothers, and young children. These powers have been utilized widely, both in establishing new work and in consolidating plans already under way. "In a number of instances the previously existing schemes of local sanitary authorities have been amalgamated with a recent county council scheme, thus securing absence of overlapping and the appointment of whole-time officers."

Voluntary effort in the direction of maternal care and child-welfare work has been checked by the war, thus making the need of official action more urgent. The war has also interfered with the full development of official plans through its withdrawal of doctors from such service. "The urgent call of the army for all available medical practitioners has interfered with the rapid development of maternity and child-welfare centers under medical supervision to the extent which the board considers imperative to secure the full measure of success." The formation of such centers is urged, nevertheless, with such partial medical attendance as it may be possible to secure.

The report contains a brief account of anthrax due to the use of infected shaving brushes, which is noted on pages 127 and 128 of this issue of the MONTHLY REVIEW.

GREAT BRITAIN.—*Home Office. Annual report of the chief inspector of factories and workshops for the year 1916. London, 1917. 10 pp.*

This report notes briefly the range of activities of the representatives of the department during 1916, the most important being prevention of accidents and dust explosions in munition and other factories, and the securing of adequate ventilation in airplane works; advising the ministry of munitions as to the welfare measures needed in controlled factories; securing suitable fencing of machinery, adequate means of escape in case of fire, good sanitation and welfare conditions in factories and workshops generally; and assisting other Government departments directly engaged in war work, with especial reference to obtaining information with respect to the indispensability in certain trades of interned aliens, and securing the replacement of men by other labor, involving particularly the substitution of women in a large variety of industries.

The report notes a general tendency among employers to restrict the weekly hours of work to an amount very little, if at all, in excess of those allowed under the factory act and to arrange for more elasticity in the daily limits. In many factories full use has been made of the overtime allowed, while in others overtime has been intermittent for "it is fairly well recognized now that continuous and excessive overtime very soon produces lassitude and slackness among workers, and injuriously affects efficiency and both the quality and quantity of the work."

The most important work done by the department, it is stated, has been in connection with the substitution of women in manufacturing industries, the factory inspectors giving their attention particularly to promoting and guiding the conditions of substitution of women for men, the administration of emergency orders made necessary by war conditions, and the development of more general conditions of welfare in munition and nonmunition industries.

It appears that the one absolute limit to the replacement of men by women lies in those heavy occupations and processes where adaptation of plant or appliances can not be effected so as to bring them within the compass even of selected women, of physical capacity above the normal. Very surprising, however, is the outcome of careful selection, even in fairly heavy work, in rubber manufacture, paper mills, oil cake and seed crushing mills, shale oil works, shipyards, iron and tube works, chemical works, gas works, and stacking of coal, tan yards, coarse ware, and brick making, flour milling, and other trades.

It is noted in this connection that the acquisition of men's rates of pay in certain industries has had a peculiar enheartening and stimulating effect. The difficulty appears not to be to substitute women for men directly, but to get women to take the places of those who have replaced men. As to the effect produced by heavy work upon the health of women, no definite information appears to be available, although some work has given evidence of strained health, especially where women have been substituted for men in the processes

of boarding and pressing in hosiery work. So far as the administration of special orders is concerned, it is stated that excessive overtime and Sunday labor have been checked and as nearly as possible abolished and night employment of girls under 18 years of age greatly decreased. The double 12-hour shift method is the predominant one, but cases of the shortened 10-hour day and night shifts are increasing. The three 8-hour shift method does not make much progress.

The report calls attention to great development of welfare work during the year in factories employing women.

GREAT BRITAIN.—*Ministry of Munitions. Handbook on Controlled Establishments. London, 1916. 75 pp.*

This handbook has been prepared "for the purpose of providing firms whose establishments have been declared controlled [that is, recognized by the Government as being engaged upon work of national importance] under section 4 of the munitions of war act, 1915, with a ready means of reference to the provisions of the acts, and the various rules, orders, and instructions which have been issued in connection therewith by the Ministry of Munitions." There are, however, many establishments that are not controlled and the hope is expressed that the handbook will be found useful to the owners of such plants who may be contemplating making application for their establishments to be declared controlled. Particularly as a guide to them, the first section of the pamphlet was prepared, explaining the meaning of control, the effects of an order of control upon the persons employed and upon the owner, the limits of control, the advantages of control, and the methods of making application for an order of control. Two advantages declared to accrue from an order of control are (1) labor conditions in the establishment are rendered more settled, and (2) "the existence of the provisions as to the limitation of profits helps to remove the apprehension which sometimes prevails among workmen, that increased output, due to increased exertion on their part, may result in giving their employers an excessive profit." On June 3, 1916, 3,591 establishments had been declared controlled.

— — *Health of Munitions Workers Committee, interim report. Industrial efficiency and fatigue. London, 1917. 121 pp. Price, 1s. 3d. (30 cents).*

See pages 14 to 19 for a digest of this report.

— — *The Boy in Industry. Three articles of interest and value to employers, with a foreword by the Right Hon. Dr. Addison, M. P., Minister of Munitions. London, 1917. 47 pp. Price, 3d. (6 cents).*

A plea for the welfare supervision of boys in industry and commended by the minister of munitions to parents, employers, social workers, and teachers "in the hope that the problem to which it is directed may be brought nearer solution." The first article states the problem involved in directing along right lines the efforts and energies of boys between the ages of 14 and 18 when they are receptive to influences both good and bad. The second article discusses his place in the factory and the necessity for proper supervision of the boy's health and encouragement in his efforts. The third article emphasizes the need for closer cooperation between factories and technical schools, and instruction for the boys in civics, elementary political economy, hygiene, etc. A great need, however, appears to be a more intimate understanding on the part of employers and employees of each other's point of view. To this end the boy, upon employment, should be taken charge of by a "human leader" or welfare supervisor, who will watch over his health, his education, his industrial progress, his recrea-

tion, and thus establish in the boy's mind "a tradition of continued supervision, of friendship, and guidance, and that deplorable feeling of isolation which is responsible for sending so many boys into difficulties in their early teens will be removed under the wonderful spell of leadership."

The pamphlet closes with an actual working scheme along the lines suggested.

GREAT BRITAIN.—*National Health Insurance. Accounts of the national health insurance funds of England, Wales, Scotland, and Ireland during the period July 15, 1912, to January 11, 1914, together with the report of the comptroller and auditor general thereon.* London, 1916. 42 pp.

The first accounts of the insurance funds established by the national insurance act of 1911, which came into operation in July, 1912. Except in the case of sanatorium benefits, members were not entitled to receive benefits until six months had elapsed. The expenditures for sickness, maternity, and medical benefits, therefore, are for a period of 12 months instead of the 18 covered by the report.

The accounts are interesting as illustrating the complexity of the system, recommendations for the simplification of which were made during 1916 by a departmental committee appointed for the purpose.

— — — *Medical research committee. First report of the special investigation committee upon the incidence of phthisis in relation to occupations. The Boot and Shoe Industry.* London, 1915. 29 pp.

This is the first of a series of reports. It describes briefly the development of the boot and shoe industry, noting the factory processes and hygienic conditions and calling attention particularly to the high mortality rate from phthisis. In 1910-1912 the mortality rate per 1,000 occupied males, from all causes, was 14.12, and from phthisis 1.68, while the mortality rate per 1,000 males in the boot and shoe industry was 19.3 from all causes and 2.76 from phthisis. Taking the number of deaths from all causes in this industry, it is stated that phthisis was responsible for 26.5 per cent. The following conclusions were reached in the investigation:

1. Phthisis is specially prevalent among workers in the boot and shoe industry, as compared with the general population.

2. The individual worker is predisposed to infection by the sedentary nature of his employment, and possibly by the attitude he adopts at work.

3. The infection is probably increased by the number of infective workers, and favored by want of light, the presence of infected dust, and inadequate ventilation in the workrooms.

These conclusions would seem to suggest the necessity for improvements in ventilation and the introduction of periods of rest and exercise for the workers, and the committee so recommends. It also recommends that provisions be made for employment for sanatorium patients by the establishment of a work place for the manufacture of boots and shoes in connection with the sanatorium where consumptive operatives in the early stages of disease and convalescent patients may carry on their trade under medical supervision for such hours as they are able and earn wages in proportion.

— — — — *Second annual report, 1915-16.* London, 1916. 70 pp.

Reports the activities of the committee in its efforts to solve the medical questions of immediate national urgency in war time. An important work of the committee has been the making of a card index of the medical history of every soldier patient in the hospitals, which, in addition to its immediate military and scientific value, is expected to furnish a means of checking the claims for pensions which will be filed in the future and will be based upon disabilities alleged to be due to wounds or sickness as a result of active service.

The report contains sections on trench nephritis, disorders of the soldier's heart, measles in military camps, and other matters pertaining to the work of the committee in connection with the war.

GREAT BRITAIN.—*Old-age pensions. Copy of Treasury scheme for the award of additional allowances to old-age pensioners suffering special hardship owing to the war. London, 1916. 66 pp.*

This report is noted on pages 34 and 35 of this issue of the MONTHLY REVIEW.

— *Statistical abstract for the United Kingdom in each of the last 15 years, 1901 to 1915.—London, 1917. 431 pp.*

This volume contains comparable statistics on revenues and expenditures, commerce, prices, shipping, acreage under cultivation and production, fisheries, railways, building associations, societies, insurance, vital statistics, education, etc.

IRELAND.—*Department of Agriculture and Technical Instruction. Report and tables relating to Irish agricultural laborers, 1915. Dublin, 1916. 20 pp. Price, 1½d.*

Shows the number and earnings of Irish migratory agricultural laborers and the wages of Irish agricultural laborers in 1915. It is estimated that in 1915, 13,000 Irish agricultural laborers migrated to Great Britain, a falling off of about 19,000 since 1900. The number of migrants enumerated by police enumerators of agricultural statistics was 7,354, or approximately 60 per cent of the number actually migrating. Approximately 86 per cent of these were landholders or sons and daughters of landholders. Those going to England, it appears from the report, generally received 25s. (\$6.08) per week, with free lodgings, fuel, and allowances of potatoes and milk or beer. The pieceworkers earned up to 35s. or 40s. (\$8.52 to \$9.73) a week. Those employed in Scotland, mostly at digging potatoes, earned from 25s. to 30s. (\$6.08 to \$7.30) per week, with free lodging, fuel, and sometimes an allowance of potatoes; on piecework they made as much as 35s. (\$8.52) per week. The following table shows the general rate of weekly wages in 1915 of male agricultural laborers who did not live in free cottages or receive allowances of any kind:

RANGE OF WEEKLY RATE OF WAGES PAID TO IRISH AGRICULTURAL LABORERS IN 1915 FOR EACH SPECIFIED OCCUPATION.

Occupation.	Weekly rate of wages.
Plowman.....	\$3.47 to \$4.01
Cattleman.....	3.16 to 3.71
Generallaborers.....	2.92 to 3.35
Boys.....	2.07 to 2.49

The allowances, it is stated, may include any or all of the following: Free house and garden, potato ground, milk, fuel, and grazing, the estimated value of these perquisites generally ranging from about 4s. 6d. to 5s. 6d. or 6s. (\$1.12 to \$1.34 or \$1.46) per week. It appears that the general rates of weekly wages were from 1s. to 1s. 6d. (24 cents to 37 cents) higher in 1915 than in 1914, while the estimated values of weekly allowances were about 1s. 6d. (37 cents) higher than in 1914.

— *Local Government Board. Annual report for the year ended 31st March, 1916. Dublin, 1916. 59 pp.*

Reports the activities of the board in the administration of various local government acts, motor-car acts, old-age-pension acts, Unemployed Workmen

Act, war relief, poor relief, public-health acts, tuberculosis acts, laborers' acts, etc. States among other things that 2,300 persons benefited from the war-relief fund and that a daily average of 68,753 persons benefited from poor-relief fund, being 3,874 less than the preceding year. The total expenditure for poor relief for the year ending September 30, 1915, was £1,357,838 (\$6,607,918.63). In the year ending March 31, 1916, 436,878 cases were attended at the dispensaries and 154,217 at the patients' own homes, the total expenditures for medical relief amounting to £209,742 (\$1,020,709.44).

JAPAN.—*Imperial Cabinet. Bureau of General Statistics. Causes of death during 1913. Vol. 1: 21, VI, 611, 71*, 12 pp. Tokio, 1916. Vol. II: 11, 313, 58* pp. Tokio, 1917.*

The first volume contains statistics on causes of death, by provinces and the districts of Fu and Ken, and including the large cities and municipalities (*arrondissements*) within the districts. Volume II contains similar information for cities having a population in excess of 50,000.

Statistics of deaths due to accidents show that 7,195 male, and 1,623 female employees, and 7,054 male and 6,139 female members of families of employees, died during the year as a result of "exterior violence" causing bodily injuries while engaged in industrial, commercial, and agricultural and allied occupations.

— — — *Vital statistics of the Empire of Japan during the year 1913. Tokio, 1917. 52, xii, 230, 80* pp.*

Data for this report on vital statistics were collected in the same manner and collated according to the method adopted in 1899, making this report comparable with issues subsequent to that date.

NETHERLANDS.—*Centraal Bureau voor de Statistiek. Maandschrift. The Hague.*

March 31, 1917. (Vol. 12, No. 3.)—Review of the labor market in certain trades, for March; unemployment and unemployment insurance; migration; report of labor exchanges; labor disputes in February; employers' and employees' organizations; collective agreements, public contracts awarded; increase in wages during the war; prices; labor-inspection service; workmen's and invalidity insurance; sanitary dwellings in course of erection; judicial decisions on insurance cases; production, etc.; war measures; foreign notes.

An article on "Increase in wages in the Netherlands during the war," based on data given in this publication, appears on pages 61 to 65 of this number of the MONTHLY REVIEW.

April 30, 1917. (Vol. 12, No. 4.)—Review of the labor market, retail and wholesale prices, unemployment insurance, emigration, strikes and lockouts and trade-union movement, together with reports from foreign countries on those subjects.

— *Tijdschrift der Nationale Vereeniging Tegen de Werkloosheid. Orgaan van den Nederlandschen Werkloosheids-Raad, 1917. Vol. 6, No. 4.*

This number is devoted to a study of unemployment and contains articles relating thereto prepared by various authorities; meditation in inland navigation; unemployment insurance in Denmark, 1915 and 1916; unemployment in foreign countries, etc.

NEW SOUTH WALES.—*Bureau of Statistics. Official Yearbook, 1915 [Sidney], 1917. 990 pp.*

This publication contains statistical data usually found in Government year-books, but special attention is called to chapters on the mining industry, social conditions, manufacturing industries, and employment and industrial arbitration, which contain considerable information of particular interest to labor. In

the year ending June 30, 1915, there were 5,268 establishments employing 116,462 workers (90,301 males and 26,161 females), to whom they paid wages amounting to £12,654,446 (\$61,582,861.46). The largest single industry was metal works and manufacturing machinery, etc., employing 22.7 per cent of the total workers. About 24.5 per cent of all those employed were women and juveniles. The average wages per year received by these workers for an average of 11.46 months' work was £112. 19s. 6d. (\$549.79). Approximately 44 per cent of the population were breadwinners.

For the half year ending March 31, 1915, 469 boys 12 years of age and under 14, and 211 boys 14 and under 16 years of age were granted licenses to engage in street trading, the average earnings for those selling newspapers ranging from 10s. to 25s. (\$2.43 to \$6.08) per week. A medical inspection of school children showed 61 per cent defective.

The report reviews briefly the history of conciliation and arbitration and the establishment of wage boards in the Commonwealth, giving the principal points of the various industrial arbitration acts, the jurisdiction and procedure of regulative tribunals, and a statement of the industrial agreements entered into between employers and employees. There were 33 such agreements made in 1915 and on December 31, 72 were in force. The provisions of the minimum wage law are also set forth.

During 1915 there were 225 industrial dislocations in mining involving 66,211 workers, and 309,507 days lost; and 89 in nonmining industries, involving 28,135 workers and a loss of 160,700 days. Approximately 54 per cent lasted one day or less. Wages was the cause in 29.3 per cent and working conditions in 25.5 per cent of these dislocations. Settlements by arbitration were reached in only 23 cases.

The report states that in 1914 there were 429 industrial accidents, 8 being fatal, 5 resulting in permanent disablement, 96 in partial disablement, and 320 in temporary disablement. The accident rate per 1,000 employees was 5.1, as compared with 5.5 in 1913 and 6.1 in 1912. The fatality rate was 0.094 in 1914, as compared with 0.15 in 1913. In coal mining the fatality rate per 1,000 employees was 0.85 in 1914 and 0.95 in 1913, while in metalliferous mines the fatality rate was 1.49 in 1914 and 2.66 in 1913. Wages in the mining industry ranged from 2s. 2½d. to 4s. 2d. (\$0.54 to \$1.01) per ton for miners, and from 8s. to 12s. (\$1.95 to \$2.92) per day for others in coal mines; and from 8s. to 14s. (\$1.95 to \$3.41) per day for all workers in metalliferous mines.

In 1915 there were 52,028 claims for maternity allowances, in each case the mother receiving £5 (\$24.33) for each birth, only one allowance being made in cases of plural births. On June 30, 1915, there were 8,138 invalid pensions current; the amount paid in these cases is £26 (\$126.53) per annum to persons over 16 years of age and permanently incapacitated for any work. Since December 15, 1910, £235,012 (\$1,143,685.90) have been paid in pensions. An old-age pension of £26 (\$126.53) per annum is granted to men over 65 and to women over 60 years of age. On June 30, 1915, there were 41,042 old-age and invalid pensions current, and the amount annually needed to pay pensions to those persons is estimated at £1,037,192 (\$5,047,494.87). The average fortnightly pension payment was 19s. 5d. (\$4.72) for old-age pensions and 19s. 8d. (\$4.79) for invalid pensions. The old-age pensioners represent 17.7 per 1,000 of population.

The total income of the friendly societies in 1914 was £612,583 (\$2,981,135.17), and the total benefits paid by them amounted to £399,550 (\$1,944,410.08).

NEW SOUTH WALES.—*Monthly Statistical Bulletin, March, 1917. Sydney, 1917. 53 pp.*

The current number contains vital statistics; statistics of commerce; state revenues and expenditures; prices of agricultural and dairy products, and of

food; manufacturing statistics; wages; price regulation under war precautions, regulations, 1916; farm and orchard production, etc.

The cost of living in Sydney, as shown by a statement of the retail price level at various periods, has steadily increased since July, 1914. Using that month as a base, the level during March, 1917, rose to 170.8 for meats, 121.6 for other foods and groceries, and for the two classes combined to 134.3.

The index numbers, calculated on f. o. b. prices, Sydney, of principal articles of domestic produce exported, as reported for all articles, in March, 1917, reached 2,061, the average prices of the whole year 1901, 1,000; on all articles excepting metals the index numbers reached 2,182.

The following table shows the increase since 1905 in various items reported under statistics relating to manufactories:

STATISTICS OF MANUFACTURES, 1905 AND 1916.

Year.	Number of establishments.	Persons employed.			Value of plant and machinery.	Total wages paid.	Value of output.
		Males.	Females.	Total.			
1905..	3,700	56,111	16,064	72,175	\$39,087,475	\$25,263,705	\$146,131,992
1916..	5,199	87,697	28,676	116,373	88,603,275	64,862,834	345,958,264

The maximum prices allowed to be charged—in some cases retail and in others wholesale—for some 30 articles of common use are given in this issue.

Prices are fixed by orders of the Minister of Defense under the Commonwealth War Precautions Regulations, 1916.

NEW ZEALAND.—*Journal of the Department of Labor, April, 1917. Wellington, 1917; viii, 145-195 pp.*

The cover page of the April issue of the Journal of the Department of Labor of New Zealand contains a brief note to the effect that the "publication will cease with this (April) issue. This step has been found necessary, owing to the war and to its effect on the cost of labor and material." In view of this fact, it may be well to note briefly some of the contents of this issue of the journal, which, among other information, gives a statement of employment and trade for the month ending March 27, 1917; reports of the women's employment branches; and tables showing persons assisted by the department of labor during March, current retail prices on the 15th of March and the cost of living in New Zealand—retail prices.

During March 184 persons were sent to private employments and 78 to Government work; 106 married and 112 single domestics, etc., were assisted by women's employment branches. The number applying for assistance or the number asking for help is not given.

The following table shows the percentage of increase in prices for March, 1915, 1916, and 1917 over prices ruling on July 31, 1914:

DOMINION WEIGHTED INDEX NUMBERS AND PERCENTAGES OF INCREASE IN RETAIL PRICES OF THREE FOOD GROUPS, MARCH, 1915, 1916, AND 1917, OVER PRICES RULING IN JULY, 1914.

Commodity group.	July, 1914, index number.	March, 1915.		March, 1916.		March, 1917.	
		Index number.	Per cent increase over July, 1914.	Index number.	Per cent increase over July, 1914.	Index number.	Per cent increase over July, 1914.
Groceries.....	1,053	1,207	16.84	1,195	15.68	1,284	21.30
Meat.....	1,126	1,212	7.64	1,321	17.31	1,426	26.64
Dairy products.....	1,057	1,131	7.00	1,233	16.65	1,344	27.15

NEW ZEALAND.—*Statistics for the year 1915. Volume III. Wellington, 1916. iv, 236 pp.*

This volume contains statistics relative to production, finance, and postal and telegraph service.

Comparable statistics on manufactories, machines, and works for 1896 and 1911 show increases as follows: In number of establishments, from 2,459 to 3,519; in number of persons employed, from 27,389 to 45,965; in amount of wages paid, from £1,907,592 (\$9,283,296) to £4,705,305 (\$22,898,367); in cost of materials used or worked upon, from £3,285,247 (\$15,987,655) to £19,937,853 (\$97,027,562); in value of output, from £9,549,360 (\$46,471,960) to £29,534,642 (\$143,730,335); and in value of lands, buildings, machinery, and plants, from £5,796,017 (\$28,206,317) to £14,430,355 (\$70,225,323).

The operation of the post-office savings bank, as reported, shows an increase in the volume of business done during the year over every other year since its institution in 1867. The number of offices on December 31, 1915, was 787. During the year 970,759 deposits were made, amounting to £13,706,057 (\$66,700,526); the cost of management was £30,000 (\$145,995); 83,244 accounts were opened and 57,421 were closed, and 509,085 remained open, with £22,166,365 (\$107,872,615) standing to their credit, an average of £43 10s. 10d. (\$212) to each account, at the close of the year. The total interest accruing during the year amounted to £707,252 (\$3,441,842).

There were 728 friendly societies in existence on December 13, 1915, with an aggregate membership of 73,027, and funds of all kinds amounting to £1,852,355 (\$9,014,486). Their total receipts for the year for the medical and management funds were £116,988 (\$569,322), for sick and funeral funds £250,706 (\$1,220,061). The total expenditures were £155,891 (\$563,984) and £156,164 (\$759,972) under these titles, respectively.

— *Twenty-fifth annual report of the Department of Labor, 1916. Wellington, 1916. 21 pp.*

Covers the financial year April 1, 1915, to March 31, 1916. During the year 2,549 persons were sent to private employment and 3,429 to Government work, a decrease of 1,537 from the total of the preceding year. Next to laborers, who formed approximately 74 per cent of the total, the largest number sent to work was carpenters (about 10 per cent). A large increase in the amount of overtime work is noted—432,250 hours, as compared with 296,703 in 1914–15. This occurred almost entirely in those trades engaged in the manufacture of articles of military requirement. There were 1,065 accidents (3 fatal) during the year, an increase of about 10 per cent over the preceding year. It is noted that of 177 disputes dealt with by them 134 (75 per cent) were settled or substantially settled by the commissioners and councils of conciliation. Fifty-two cases were dealt with under the workmen's compensation act, or 13 less than in 1914–15. The report includes a statement by the superintendent of workers' dwellings relating to the operation of the Workers' Dwellings Act, 1910.

— *Workers' Dwellings Act: Yearly Statement by the Minister of Labor. [Wellington, 1915.] 5 pp.*

A statement submitted by the superintendent of workers' dwellings relating to the operations of the act during the year ending March 31, 1915.

ONTARIO.—*Twenty-fifth annual report of the Ontario Bureau of Mines, 1916. Part 1. Toronto, 1916. 311 pp. 3 maps.*

This report covers the calendar year 1915 and notes that the decline in the value of mineral output which was occasioned in 1914 by the outbreak of the war continued in 1915 only in so far as nonmetallic production (including mica,

feldspar, graphite, salt, etc.) was concerned, but states that this decline was more than offset by a great increase in the production of metals, so that the total value of the mineral production of Ontario for 1915 exceeded that of the former record year, 1913, by over a million dollars. The greatest increase was in the value of nickel-copper matte, which approached \$21,000,000, as compared with a little over \$7,000,000 in 1914. It should be stated, however, that in 1914 the value of nickel was placed at 11.2 cents per pound and of copper at 7.2 cents, while in 1915 these figures were 25 and 10 cents, respectively. "These figures are conservative, in view of the fact that the average price of refined copper in 1915 was about 17 cents and that the nickel refined in Ontario in 1915 was sold at 40 cents per pound." The 1914 mineral production was 13 per cent less than that of 1913, while the 1915 production increased 17 per cent over that of 1914. There were 17,190 persons employed in 1915, the wages received amounting to \$12,398,765.

The number of accidents at the mines, metallurgical works, and quarries is given as 22 fatal (58 in 1914) and 496 nonfatal (445 in 1914). Twenty-one of the fatal and 415 of the nonfatal were at mines. Of these 21 fatal accidents at the mines one-third were due to explosives. The fatality rate per 1,000 employees in mines, metallurgical works, and quarries was 1.5 in 1915, "the lowest of which there is any record in Ontario mines."

It is noted that one result of the workmen's compensation law, which became effective on January 1, 1915, has been the speedy settlement of claims without expensive litigation, and attention is called to the fact that the rate paid by mine operators was 3 per cent of the pay roll. This, however, was reduced to 2.5 per cent for 1916.

PORTUGAL.—*Boletim da Previdência Social. Ano 1, No. 1, October to December, 1916; No. 2, January to March, 1917. Lisbon.*

These are the first and second issues of the Bulletin of Social Welfare issued by the Portuguese Ministry of Labor and Social Welfare.

It is stated in the preface to bulletin No. 1 that the bulletin will be principally for the purpose of encouraging the development of institutions of social welfare; making methodical investigation, publishing of statistical data, and official acts concerning social welfare, and the publication of monographs and studies, with especial reference to their industrial value. Part 1 will be devoted to statistics, inquiries, reports, resolutions of assemblies, studies, and monographs, and part 2 to legislation, decrees, orders, etc., resolutions, and judicial decisions respecting social welfare.

Bulletin No. 1 includes: Investigation concerning mutual aid societies; distribution of occupations in Portugal; influence of the war on the cost of living; chart of prices of articles of food; notes on the National Mutuality Congress; legislation (including the law establishing a national labor office) and resolutions relative to fundamental points in the constitution of mutual aid associations.

Bulletin No. 2 contains a report on the economic conditions of Portuguese laborers, influence of the war on the economic organization of European peoples, distribution of occupations in the different districts as shown by the census of 1890 and 1911, national provident fund, proposed law on agricultural mobilization, register of mutual aid associations (continued), foreign notes, and social legislation.

An article on "Cost of living in workmen's families in Portugal," based on data given in these bulletins, appears on page 137 of this number of the MONTHLY REVIEW, and a summary of the law establishing a minister of labor and of the decree organizing the new department is given on page 141.

QUEENSLAND.—*Statistics of the State of Queensland for the year 1915. Brisbane, 1916. Parts A to K, with index.*

Yearbook containing statistics on population, commerce, finance, and other subjects usually found in State yearbooks.

RUSSIA.—*The Russian Yearbook, 1916. London, [September, 1916.] V-VIII, 779 pp.*

This is the sixth issue of this publication, which is a compilation of such data as are usually found in government yearbooks. One chapter is devoted to the study of labor conditions: Regulations, labor of war prisoners, female and child labor, wages, strikes, cooperation, and credit societies. Other chapters of interest are: Peasant industries and Diary of war, 1915-1916. Among the recently enacted laws the following are mentioned: Compulsory sickness insurance for workmen (May, 1912), lead poisoning regulations (1913), industrial tax on profits, and the income tax law (Jan. 1, 1917).

The following table refers to wages of workmen who are subject to the law of fines. The number reported is quite representative as it includes 1,539,440 out of a total of 2,151,191 workmen employed in establishments subject to factory inspection.

EARNINGS OF WORKMEN IN FACTORIES AND WORKS SUBJECT TO FACTORY INSPECTION, RUSSIA, 1911 AND 1912.

[In this table rubles have been converted into dollars on the basis of 1 ruble=51.5 cents.]

Industry.	Average annual earnings.	
	1911	1912
Cotton.....	\$112.27	\$113.30
Wool.....	123.69	123.18
Silk.....	109.13	114.85
Flax.....	87.55	92.70
Mixed textiles.....	142.14	140.08
Paper and printing.....	145.75	148.32
Wood.....	131.84	132.87
Metals.....	204.46	206.00
Minerals.....	120.00	123.09
Animal products.....	152.44	154.50
Foodstuffs, etc.....	81.89	80.34
Chemicals.....	138.02	140.60
Petroleum.....	190.04	171.07
Other industries.....	225.57	207.55
Average, all industries.....	129.27	131.33

In comparing these yearly earnings with similar data reported for other countries, one must consider that public holidays per year number over 100. The length of the working day must also be taken into consideration. Of 1,971,202 mill and factory hands engaged in production, and for whom hours of labor were reported, 1,164,362 were males, of whom 90,389 worked 8 hours, 229,974 worked 9 hours, 54,430 worked 9½ hours, 304,665 worked 10 hours, 93,527 worked 10½ hours, and 301,002 worked more than 10½ hours per day. Hours of labor were reported as not in excess of 10½ per day for 512,006 women (89.3 per cent) in mills and factories; as more than 10½ for 62,000 women.

In September, 1915, a royal ukase instituted a system of free agricultural technical training of war orphans and children of those crippled by army service, open to all persons of both sexes under 17 years of age of any race, faith or condition. The expense of the school is chargeable to local governments, monasteries, church charities, and agricultural societies, aided by grants

made by the State. The training is elementary in scope and is founded upon the principle that Russia is essentially an agricultural country. Their immediate management is intrusted to local zemstvos subject to supervision by the minister of agrarian settlement and agriculture. In commercial schools the English language, which has heretofore been elective, is being substituted for the German, which has been compulsory. The minister of finance is acceding to the requests for the substitution expressed in mercantile circles.

Notwithstanding the large number of refugees, prisoners employed, and Chinese and Koreans brought in as workers, there is still a scarcity of laborers. The number of applications for help greatly outnumber the persons applying for work. On October 14, 1915, it was reported that 556,097 prisoners, exclusive of those employed in local improvement and sanitation, were engaged in State and agricultural work, and 90,000 were working in factories and various industries at the end of September, 1915. Wages, owing to war conditions, are now (1916) very much higher throughout the Empire.

In the Moscow government the number of female laborers continues to increase more rapidly than that of male laborers. Increases are noted in brick works, metallurgical works, especially in tin-plate works and pen factories, but over 90 per cent of the women industrially employed are in the spinning industries. In this region over 44 per cent of the total number of workers are women, and in other regions the ratio varies from 30 to 51 per cent.

On August 2, 1916, a new law came into effect which establishes four meatless days per week by prohibiting its sale or consumption; and the slaughtering of horned cattle, calves, sheep, lambs, and pigs, is prohibited on all but three days per week, and then only under the supervision, as to quantity, of the municipal and district authorities.

SPAIN.—*Boletín del Consejo Superior de Emigración. Tomo IX. Madrid, 1917. 263 pp.*

This bulletin is entirely devoted to various phases of migration of persons. The questions discussed in the current number include improved hygiene and sanitary measures necessary to insure the health of voyagers, such as abolition of third-class cots; size of cots; air space; ventilation; fees chargeable to emigrants; report of the various sessions of the Superior Council of Emigration and its divisions, held January 2, 11, 12, and 24, 1917; political and economic influence resulting from emigration; immigration laws, Argentina and United States; royal orders issued by Spain, relating to commissions (*patente*) held by foreign companies engaged in carrying emigrants, regulating the delivery of personal effects to returning emigrants, emigrants' certificates, etc.; regulations for disinfecting and sterilizing cabins, linen, etc., on ships engaged in carrying emigrants.

— *Boletín del Instituto de Reformas Sociales. Madrid, April, 1917.*

Report of the secretary's office, and of its special sections; minutes of assemblies, conventions, etc.; legislation, decisions of courts; foreign notes.

— *Memoria de la Junta Directiva del Fomento del Trabajo Nacional, 1916. Barcelona, 1917. 69 pp.*

Report of the operations of the committee in charge of national public works for the year 1916.

Among the topics reported upon are: Difficulties arising from the war; problem of necessary supplies for subsistence, exportation, transportation, etc.

A directory of the various committees and councils operating as organs subsidiary to the general supervisory committee.

SWEDEN.—*Sociala Meddelanden utgivna av K. Socialstyrelsen. No. 3. Stockholm, 1917. 164 pp.*

Emergency war measures on the food supply and unemployment, operations of the public employment exchanges, securing of agricultural labor, review of labor conditions, strikes and lockouts, retail and wholesale prices, cattle and fish prices, etc.

— *Statsvetenskaplig Tidskrift för Politik—Statistik—Ekonomi utgifven af Pontus E. Fahlbeck. Volume 20, No. 2, April, 1917. Lund, December, 1916.*

This is a periodical devoted to discussions of political science, statistics, and economics.

The current issue contains a study on each of the following subjects: The right of voice in parliament; newer political doctrines; a criticism on international marine statistics.

UNOFFICIAL PUBLICATIONS RELATING TO LABOR.

ABBOTT, GRACE. *The immigrant and the community. New York, Century, 1917. 303 pp.*

The author of this book speaks with authority from more than eight years' work with the Immigrants' Protective League and seven years' residence at Hull House, Chicago, besides investigations in this country and abroad. The present study is an effort "to show concretely how the immigrant and indirectly the community have suffered both materially and spiritually from our failure to plan for his protection and for his adjustment to American life." There are sections dealing with the newcomer's search for work, the evils of casual labor, and the exploitations of private employment agencies; the immigrant and organized labor; the unsuitability and inadequacy of our educational system; the pressing need of better legislation, wiser administration, and a more sympathetic understanding in general.

The book contains numerous stories of human interest in the experience of the league, of which Miss Abbott is a director. Various authorities are freely quoted and some Federal and State statistics are given. To those persons who view with alarm the great increase in the actual number of immigrants the following comparative statement may be reassuring. The slight range in the figures shows that the proportions have remained almost stationary for a half century.

PER CENT OF FOREIGN BORN IN TOTAL POPULATION AND AMONG EMPLOYED PERSONS IN EACH CENSUS YEAR, 1870 TO 1910, INCLUSIVE.

Census year.	Per cent of foreign born—	
	In total population.	Among employed persons.
1870.....	14.4	32.5
1880.....	13.3	30.5
1890.....	14.7	31.4
1900.....	13.6	30.6
1910.....	14.7	31.2

AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE.—*Stabilizing Industrial Employment. Annals, May, 1917. Editorial Office, Woodland Avenue and Thirty-sixth Street, Philadelphia, Pa.*

Contains some of the papers read at the conference of employment managers held at Philadelphia in April, 1917, and which were noted in the June issue of

the MONTHLY REVIEW (pp. 890 to 900). Other articles dealing with the stabilization of industrial employment are: The standardization of working essentials; Recommended standard practice on medical supervision in Detroit plants; Planning promotion for employees and its effect in reducing labor turnover; The reduction of absences and lateness in industry. Relating particularly to the employees' voice in management are articles on, Who is boss in your shop?; Suggestions from employees help company save money; Centralized labor responsibility from a labor-union standpoint; The mechanism of mind; Causes of "turnover" among college faculties.

BRITISH TRADES-UNION CONGRESS.—*Parliamentary Committee. Twenty-fourth and twenty-fifth quarterly reports, June and December, 1916. London, 1916. 53 and 65 pp., respectively.*

Contain items of national and international interest to trade-unionists and others. Include reprints of the proceedings of the Leicester Congress of 1903 and the Leeds Congress of 1904.

COUNCIL OF RUSKIN COLLEGE, OXFORD, ENGLAND. *The reorganization of industry. 3d ed. London, 1916. 85 pp.*

A report of a three-days' conference held in Oxford in July, 1916, to consider the reorganization of industry, commerce, and finance after the war. The conference was convened by Ruskin College, whose resources are all used for educational work in the labor movement, "in the belief that the time had come for more definite thinking by the labor movement upon the problems which labor will have to face when peace comes, and in the hope that a full and frank discussion between recognized students of industrial questions and well-known representatives of labor might help towards the formulation of a national policy."

The delegates numbered 82 and represented 52 trade-unions, trades councils, cooperative societies, and labor or other organizations. The papers presented will be summarized in a later issue of the MONTHLY REVIEW.

FYFE, THOMAS ALEXANDER. *Employers and Workmen. Handbook explanatory of their duties and responsibilities under the munitions of war acts, 1915 and 1916. Second edition. London and Edinburgh, Wm. Hodge & Co. 269 pp.*

The author writes as chairman of the munitions tribunals. The book is intended to be interpretive of the intricacies and statutory enactments and official orders incident to the munitions acts of 1915 and 1916, and has been issued for the purpose of affording employers and their representatives and workmen an opportunity to become thoroughly acquainted with the details of the conditions under which industrial work is at present conducted. The book contains as appendixes the text of the munitions-of-war act with amendments; rules with respect to limitation of profits of controlled establishments; rules with respect to "leaving" certificates; rules governing tribunals; abstract of ordering of work regulations for controlled establishments; orders relating to dilution of labor; order relating to war-service badges; orders extending definition of munitions work; notes for the guidance of employers to whose establishments men are assigned to work as army-reserve munitions workers; and summary of decisions on the appeal tribunals, 1916.

GERHARD, HANNES. *Cooperation in Finland. Edited by Lionel Smith-Gordon, librarian of Cooperative Reference Library, Dublin. London. Williams & Norgate. 1916. 190 pp. and map.*

The first English edition of a standard work by one of the founders and leaders of this movement, the earlier edition having appeared in German a few years ago. The present volume describes the origin of the movement and its growth in various countries and gives a full account of its development and

present status in Finland. The author believes "that any State aid which is given should be confined entirely to technical instruction or to grants for purely educational purposes, and should involve no subsidy to, and consequently no control of, the trading functions of cooperative societies." Notwithstanding the fact that the idea of cooperation has been winning "admirable triumphs" in one country after another, there are considerable limitations to its progress, "and we must not allow ourselves to look forward, as many idealists have done in the past, to a future in which all the business of all the nations will be carried on under cooperative forms."

GENERAL FEDERATION OF TRADE-UNIONS, UNITED KINGDOM. *68th, 69th, and 70th quarterly reports, June, September, and December, 1916. London, 1916 and 1917. 8, 12, and 8 pp., respectively.*

Comprise the quarterly statements of income and expenditure and reports of the management committee.

JENKINS, FREDERICK WARREN. *Russell Sage Foundation Library. New York, 1917. 42 pp.*

A handbook on the history, scope, equipment, and methods of this library, with brief accounts of other collections in New York City of interest to social workers.

LAHY, J. M. *Le Système Taylor et la physiologie du travail professionnel. Paris, 1916. X, 198 pp.*

A critique of the Taylor system. The author condemns Taylor's conception of labor from the psychological and sociological as well as the industrial point of view. After giving a detailed definition and analysis of the Taylor system the author discusses vocational selection, wages and the system, the interior organization of the modern workshop, the physiology of labor, the problem of fatigue, and the value of the Taylor system.

LAUCK, W. JETT, AND SYDENSTRICKER, EDGAR. *Conditions of labor in American industries; a summarization of the results of recent investigations. New York and London, Funk & Wagnalls. 1917. 403 pp.*

This is a statement of some of the fundamental conditions of labor in manufacturing and mining industries in the United States during the period from 1900 to 1914 or 1915, as ascertained by Federal, State, and private investigation and here summarized in a compact and practical handbook for the student of labor conditions. The authors are well fitted to undertake such a task, having been employed as experts in various investigations. According to the preface the book is not intended as a critical discussion of facts nor an argument in favor of or against any partisan conclusion or remedial program. Such conclusions as appear to be clearly warranted by authoritative data are suggested, but "the attempt has been made to avoid the statement of opinions or of conclusions which, although the authors may feel convinced of their truth, are not generally agreed upon as the actual results of the various inquiries." The general effects of industrial changes since 1915 are touched upon where the available data warrant any conclusions, but it is stated that the permanency of the changed conditions is regarded as problematical.

The material is conveniently grouped under nine heads, as follows: I. The labor force; II. Wages and earnings; III. Loss in working time; IV. Conditions causing irregular employment; V. Working conditions; VI. The wage earner's family; VII. Living conditions; VIII. The wage earner's health; and IX. The adequacy of wages and earnings. The volume includes an index and bibliography.

LESSON, CECIL. *The child and the war, being notes on juvenile delinquency.* London, King, 1917. 69 pp.

A discussion by the secretary of the Howard Association of the increase in the number of juvenile offenders during the war, which Home Office statistics show to be 34 per cent. While the cause is to be found chiefly in the withdrawal of parental and other adult influence, "the present abnormal demand for boy labor * * * has much to answer for in increasing juvenile delinquency, particularly where boys of 12 and 13 are released from school for work; and we have it on the authority of Sir James Yoxall, M. P., that from 150,000 to 200,000 children between the ages of 11 and 13 have been so released. It can not be mere coincidence that delinquency among lads of 12 and 13 has increased in greater proportion than it has among lads in the other age groups."

NATIONAL CONFERENCE ON MARKETING AND FARM CREDITS. *Collection of papers and documents read at fourth annual session, Chicago, December, 1916.* Madison, Wis., 1917. 546 pp.

This volume records the addresses and much of the discussion of the conference in question, at which about 2,000 persons, representing more than 2,000,000 farmers, were present. The addresses, which the foreword describes as "constructive thoughts with regard to the working out of coordinated national and State policies," are grouped as follows: The Federal farm loan act and personal credit; Land settlement and immigration; Marketing of livestock; Marketing of grain and cheese; Marketing of perishable farm products and milk; and The organization of agriculture. They deal with the pros and cons of the farm-loan act; the problem of the insolvent settler and farmer; credit unions, or cooperative banks, as operated in Canada and in some States; the Negro and the southern tenant system; the inefficiency of our land settlement methods and policies and the better systems of certain other countries; cooperative marketing, and the encouragement of farmers' organizations.

NATIONAL EDUCATION ASSOCIATION OF THE UNITED STATES. *Addresses and proceedings of the 54th annual meeting, held in New York in July, 1916.* Ann Arbor, 1916. 1112 pp.

Includes papers on vocational and industrial education, continuation schools, short-unit courses, English for foreigners, and other subjects of interest to labor and industry.

NATIONAL HOUSING ASSOCIATION. *Housing problems in America. Proceedings of the fifth national conference, Providence, October, 1916.* 563 pp.

A report of the proceedings of this conference appeared in the MONTHLY REVIEW for November, 1916, pages 60-63.

NATIONAL SOCIETY FOR THE PROMOTION OF INDUSTRIAL EDUCATION. *Federal and State-aided vocational education.* 140 West Forty-second Street, New York City, May, 1917. 59 pp.

A brief review of this report appears on pages 142 to 145 of this issue.

— *Proceedings tenth annual meeting, Indianapolis, February 21-24, 1917.* Bulletin No. 24. 140 West Forty-second Street, New York City, May, 1917. 311 pp.

This report is noted on pages 145 to 149 of this issue of the MONTHLY REVIEW.

ROYAL SOCIETY OF MEDICINE. *Discussion by the sections of medicine, pathology, and epidemiology, January, 1917. The origin, symptoms, pathology, treatment, and prophylaxis of toxic jaundice observed in munition workers.* London, 1917. 106 pp. Illustrated. Price, 7s. 6d.

An extended review of this publication will appear in the August issue of the MONTHLY REVIEW.

SECRETARIAT DES PAYSANS SUISSES. *La question ouvrière agricole en Suisse. Quatrième partie: Propositions en vue de la solution du problème.* Brougg, 1917. 194 pp. (Publications du Secrétariat des paysans suisses, No. 54.)

This is the fourth and final volume of a series of publications of the Swiss Farmers' Secretariat dealing with the agricultural labor problem in Switzerland. The volume makes various suggestions for the solution of the problem of the shortage of agricultural labor. These suggestions include improvements of roads and drainage, suitable arrangement of farm buildings and outbuildings, substitution of power machinery for manual labor, etc.

SILK ASSOCIATION OF AMERICA. *Forty-fifth Annual Report.* New York, 1917. 169 pp.

Contains the proceedings of the forty-fifth annual meeting of the association, held in March, 1917, and a great quantity of statistical matter. Reports from various branches of the industry discuss the "serious and unprecedented problems" of 1916, and give the cost, price, labor, market, and other conditions of the trade.

Preliminary statistics for the silk industry are taken from the United States Census of Manufacturers for 1914. These show increases between 1909 and 1914 as follows:

	Per cent.
Number of establishments.....	5.8
Capital invested.....	38.1
Number of wage earners.....	9.2
Wages paid.....	22.1
Cost of materials.....	34.0
Value of product.....	29.0

Of the 108,170 wage earners in 1914, 59 per cent were females. Of the 7,808 persons under 16 years of age, which number is 70 less than in 1909, 5,309 were girls. More than 6,000 of the children were in the spinning branch of the industry. In 1909 only 4.8 per cent of the wage earners worked 54 hours or less per-week. In 1914 the percentage was 58, and the change within recent months from a 10 to a 9-hour day will further increase this per cent. The year 1916 showed wage increases also. There are no noticeable seasonal variations in silk manufacturing, the number of employees varying month comparatively little from month to month.

WARD, HARRY F. *The labor movement from the standpoint of religious values.* New York, Sturgis & Walton, 1917. 199 pp.

A verbatim stenographic report of a series of eight noonday lectures delivered at Ford Hall, Boston, in 1915, by the professor of social service of the Boston University School of Theology. The questions and answers of the open forum following each lecture, participated in by the "conglomerate crowd of ministers, business and professional men, socialists, labor unionists, and I. W. W.'s" that made up the audience, are included in the volume.

The eight subjects discussed by Dr. Ward are trade-unions, socialism, syndicalism, the demand for leisure, the demand for income, violence and its causes, labor and the law, and democracy and industry.

WEINSTOCK, HARRIS. *Statement in answer to the criticisms of Senator Wm. E. Brown, of Los Angeles, relative to the administration of the California State market law.* San Francisco, March, 1917. 48 pp.

A digest of this statement appears on pages 134 and 135 of this issue of the MONTHLY REVIEW.

WOODBURY, ROBERT MORSE. *Social insurance: An economic analysis.* New York, Holt, 1917. 171 pp.

A critical study of the cost and value of social insurance, suggested by the frequent references in literature to the burden imposed by legislation for workmen's compensation and old-age pensions. The author traces the development and describes the present extent of social-insurance legislation, presents the argument for adequate protection even though it involve compulsion, and analyzes the economic and social effects of the system. His conclusions may be briefly stated as follows: Conditions of life are made more secure and the "unevennesses and irregularities" of the income of the individual are reduced; fruitful causes of discontent among the working class are removed; in Germany the frequency of serious accidents has declined; the cost of insurance is so small a part of the total cost of production that disastrous consequences to industry are not to be feared; concern lest thrift should be destroyed is in large measure groundless; the provision of compulsory insurance against sickness, accident, and superannuation is a definite step toward the elimination of poverty and the alleviation of hardship.

SECRETARY OF LABOR'S POSITION REGARDING WOMEN'S WORK.

An article entitled "Plans for mobilization of female labor in time of war," printed in the June issue of the Monthly Review (pp. 1002-1004), contained answers of the Secretary of Labor to questions of procedure asked by the Bureau of Registration and Information of the National League for Woman's Service. These questions were asked because of the agreement existing between the Department of Labor and the Bureau of Registration and Information of the National League for Woman's Service, whereby all work concerning wage-earning women shall be conducted subject to the approval of the Secretary of Labor. The questions asked the Secretary were not printed in the June number, consequently some misunderstanding has arisen as to their application. We are therefore reprinting the answers, together with the questions asked.

1. Question.—Are firms working on war contracts for the Allies to be accorded the same assistance as is given firms working on contracts for our own Government?

Answer.—The same assistance to secure labor should be given to firms working on war contracts for the Allies as is given firms working on contracts for our own Government, unless otherwise directed by the Department as special occasion may arise.

2. Question.—Should the first effort toward securing an adequate woman-labor supply be directed toward transporting surplus labor from near-by centers (where "novelty and luxury" industries have been hard hit by war economy and which have therefore laid off many women), even though such mobilization creates difficult housing problems; or should an effort be made to bring nonwage-earning women now housed in the city into the wage-earning ranks?

Answer.—The first efforts should be to provide employment for wage-earning women, even though it may result in difficult housing problems. Women not dependent upon wage earnings should not be brought into the problem until the supply of those in the vicinity dependent upon wages has been exhausted.¹

3. Question.—When there is a woman-labor shortage but predicated upon a smaller man-labor shortage—that is, a firm needs 200 women, but can not use them unless 40 men machinists could be secured—what does the Department of Labor wish the Bureau of Registration and Information to do?

Answer.—Whenever the employment of women is dependent upon securing an additional number of men, the subject matter should immediately be brought to the attention of the Federal Employment Service so that it may utilize its machinery in securing the necessary workmen.

¹ Information is being assembled for the Secretary bearing upon the need for part-time shifts to prevent overtime work by the regular shift. As women dependent upon wages can not afford to work but a few hours a day, the data will be submitted to the Secretary of Labor so that he may decide whether he would approve of recruiting women not dependent upon wages for shift of half time or less.

4. Question.—Has there been any agreement with the Canadian Government or Canadian firms about labor recruiting campaigns in American munition centers concerning which it would be proper and helpful for this Bureau to have knowledge?

Answer.—So far as the Department has been advised, there is no agreement with the Canadian Government or Canadian firms about labor-recruiting campaigns in American munition centers. The Canadian Government undertook this Spring to recruit farm labor in the Northwest for Canadian farms, but the campaign was discontinued upon representation of this Government that such a campaign was to the mutual disadvantage of the two Governments.

5. Question.—Must women workers of enemy nations be barred from all factories engaged on Government supplies, or only from factories engaged on United States Government munition contracts? In the latter case would the term apply to other than establishments manufacturing explosives?

Answer.—It is not advisable to recommend alien enemies for employment in factories engaged on Government supplies of any character. Not having engaged in work of this character prior to the breaking out of war, it would be more satisfactory to them and to all parties concerned if their future labor is confined to work that is not intended for Government use.

6. Question.—Assuming that the Department of Labor does not approve of the practice of home work, we still are confronted with the fact that the Government has been and is now engaging "outworkers" for Army clothing and other furnishings. Under the Nation's present stress the call for "outworkers" promises to become very urgent. With a careful regard to the health hazard involved, the Bureau in cooperation with the Federal Employment Service has secured several hundred "outworkers" to meet the sharp demand for sewers on Army tent sacks and Army shirts given out by the quartermaster's depot. But there is urgent need that the Secretary of Labor lay down for us a principle of conduct in this matter before we meet other calls.

Answer.—There should be no objection to furnishing "outworkers," provided the work is to be done under conditions that conform to the State laws relative to sanitation, safety, and sweatshop practice.¹

¹ It was the consensus of opinion at the last board meeting held in Washington June 8, 1917, that the Secretary's ruling concerning "outworkers" applied only to "outworkers" for Government factories, which sharply limited the amount of work given out per individual; that there should be no recruiting of home workers for private firms working on Government contracts, at least until data bearing upon conditions of such labor had been prepared for the Secretary and he had ruled thereon. Such data are now in process of preparation.

